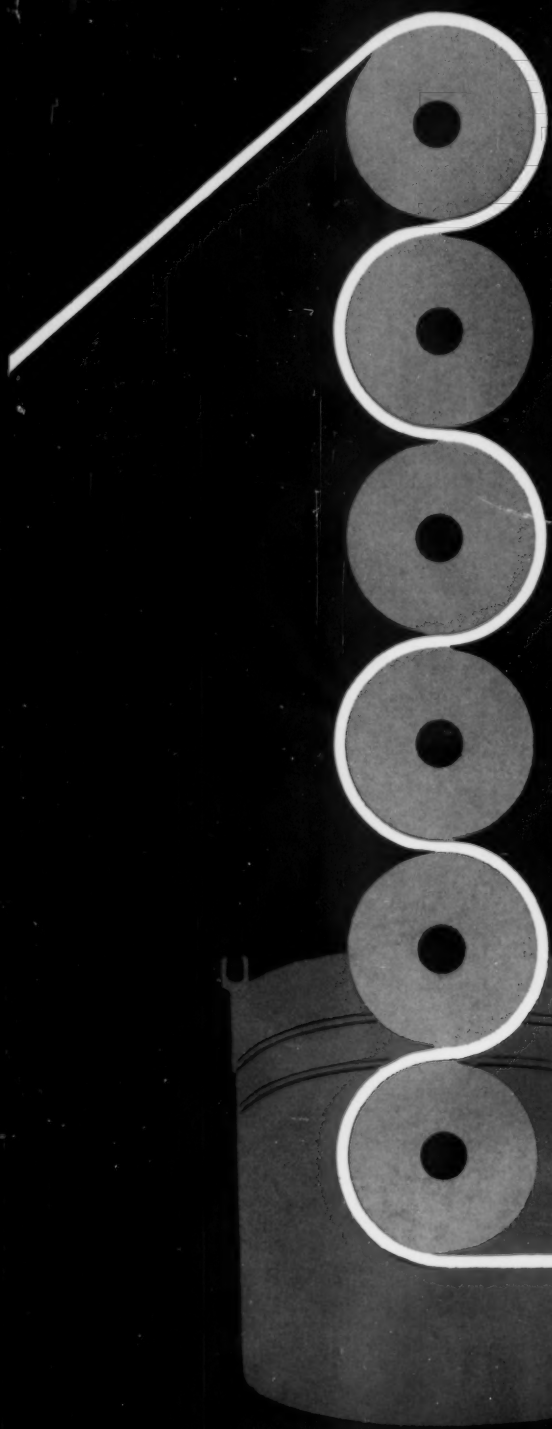
Textile World
NOVEMBER, 1958
A McGRAW-HILL PUBLICATION

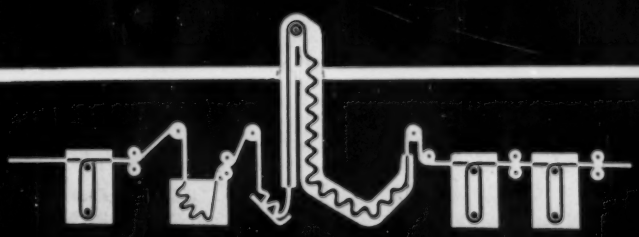
The only KNOW-HOW . . . KNOW-WHY Publication in Textiles

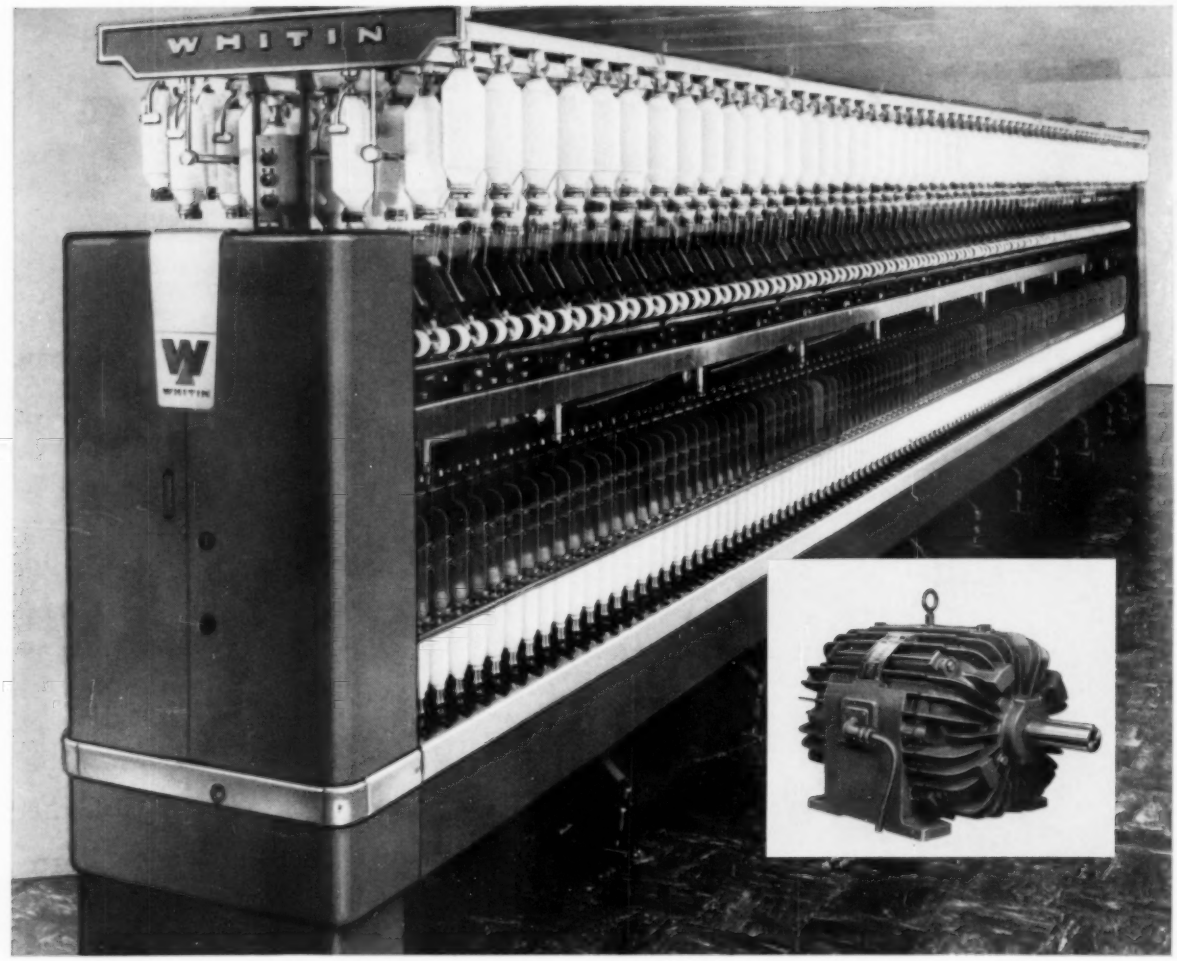


what's happening in the
CHEMICAL-TREATMENT BUSINESS
page 89

GREENVILLE SHOW REPORT
page 45

RIO GRANDE 1958 COTTON
page 53





AT WHITIN MACHINE WORKS

DIEHL* motors power new spinning frame

Described as "the world's most advanced spinning frame," the new "Piedmont" recently announced by Whitin Machine Works, Whitinsville, Massachusetts represents an investment of over a million dollars in research and tooling, and incorporates a score of innovations designed to achieve maximum operational efficiency and productivity in combination with attractiveness in appearance.

DIEHL engineers were called upon to work closely with WHITIN in the development of a motor drive that would exactly meet the requirements of this machine. The result . . . a motor of totally-enclosed design which provides extremely smooth start and smooth acceleration over its entire operating range, thus preventing yarn breakage. Despite its relatively small frame size, the motor has ample capacity to take care of various types of yarns and is equipped with thermal protection against possible excessive overloads. It has been accepted as standard equipment for the "Piedmont" Spinning Frame.

This is another example of DIEHL ability to work closely with machinery manufacturers in the development and manufacture of motors with the precise characteristics needed for efficient machine operation . . . an important reason for using DIEHL motors to power your equipment.

*Trademark of DIEHL MANUFACTURING COMPANY

Diehl®

DIEHL MANUFACTURING COMPANY

Electrical Division of THE SINGER MANUFACTURING COMPANY

Finderne Plant, SOMERVILLE, NEW JERSEY

Baltimore • Chamblee, Ga. • Charlotte • Chicago • Cincinnati • Cleveland • Los Angeles • Milwaukee • Needham, Mass. • New York • Philadelphia • Syracuse

This Month in **TEXTILE WORLD** November, 1958

Volume 108, No. 11

BUSINESS

Textile Production Hits 22-Months High . . . 14.5% above the recession low in April of this year . . . 3

Court Decision Curtails President's Tariff Powers. New York Customs Court rules President cannot modify changes in duties recommended by Tariff Commission . . . 3

Wool-Price Decline Not Likely To Reverse Soon. Australians say prices are below cost of production but see little hope of improvement soon . . . 4

1959 Auto Sales Off to Good Start. Auto-makers are optimistic, and early dealer orders indicate a banner sales year . . . 5

Japan To Restrict Wool-Goods Shipments . . . to the U. S. Voluntary restriction follows pattern set for cotton goods in early 1957 . . . 6

Operating Statements Show Mixed 1958 Sales and Profits . . . 6

Small Business Firms To Get Better Financing. Small Business Investment act will help promising small companies . . . 7

Textile Stocks Double Dow-Jones Industrials Average . . . as they continue their brilliant 1958 performance in the roaring fall stock market . . . 8

Fall Reorders Roll In. Buying is stepped up as store sales continue to mount . . . 9

Japanese-Quota-Plan Review Will Bring Few Changes. Washington believes Japan will not insist on radical changes in the existing plan . . . 9

Textile World's Index and Monthly Indicators . . . 10

MANAGEMENT

Profits vs. Liquidation (Editorial) . . . 43

Greenville—1958. Highlights of the 20th Southern Textile Exposition . . . 45

HUMANICS—Outside Interference Causes Strained Relations . . . 99

The Art of Discipline. Does the status of discipline in your department encourage the development of individual workers and also produce an efficient operation? . . . 101

PRODUCTION

. . . MODERNIZATION

The Kendall Company Completes $1½-Million Improvements . . . at its Albertville, Ala., plant . . . 54

. . . CARDING & SPINNING

Rio Grande's 1958 Cotton Is Better Than Average . . . 53

How To Make Nubs for Novelty Yarn . . . 62

. . . SPINNING

Tips on Spinning Loop Yarns. Here's how to make these currently popular yarns . . . 59

. . . THROWING

How Concordia Makes Saaba Textured Yarn . . . 64

. . . WEAVING

Keep Lay Guides Aligned and Looms Will Run Better . . . 58

New Slashers Pay Off Fast at Six West Point Mills . . . 60

. . . KNITTING

Select Yarns and Methods To Make Better Stretch Socks . . . 56

. . . ENGINEERING

How You Can Save on Electric-Power Bills . . . by selecting the best rate for your plant and using electricity most efficiently . . . 67

Please turn the page

This Month in TEXTILE WORLD continued

CHEMICAL TREATMENT

Textile Chemicals 83

New Dyes & Chemicals 85

What's Happening in the Chemical-Treatment Business. Drastic changes now going on in bleaching, dyeing, printing, and finishing are causing sharp swings in that area of textile production and business 89

DEPARTMENTS

Calendar 14
Editorial 43
Equipment and Supply News 127
Fibers, Yarns, Fabrics 123
Kinks and Short-Cuts 103
Mill Maintenance 178
New Dyes and Chemicals 85
New Literature 140
News About Men 186
News About Mills 13
News About Suppliers 180
Obituary 190
Pointers for Supervisors 101
Questions and Answers 112
Reader Service 197
Round Table 16
Textile Business 3
Textile Chemicals 83
Advertisers' Index 196

MEMBER OF ASSOCIATED BUSINESS PUBLICATIONS AND AUDIT BUREAU OF CIRCULATIONS

A McGRAW-HILL PUBLICATION

TEXTILE WORLD

PRENTICE M. THOMAS ..... **Publisher and Editor**

Louise E. Wille ..... *Managing Editor*
Richard B. Pressley ..... *Senior Associate Editor*
William G. Ashmore ..... *Associate Editor*
Robert W. Pinault ..... *Assistant Editor*
Robert E. Walk ..... *Art Director*
Carol J. Wilhelm ..... *Copy Editor*
C. Norris Rabold ..... *Consulting Editor*
William A. Newell ..... *Consulting Editor*
Leopold Licht ..... *Consulting Editor*
E. H. Helliwell ..... *Contributing Editor*
H. S. Knowlton ..... *Contributing Editor*
John Wilhelm ..... *World News Editor*
George B. Bryant, Jr. ..... *Chief, Washington Bureau*
Donald MacDonald ..... *Chief, Detroit Bureau*
Charles T. Dixon, Jr. ..... *Chief, Atlanta Bureau*
Kemp Anderson, Jr. ..... *Chief, Dallas Bureau*
Robert Gibson ..... *Chief, London Bureau*
Robert E. Farrell ..... *Chief, Paris Bureau*

Sol Sanders ..... *Chief, Tokyo Bureau*
Morrie Helitzer ..... *Chief, Bonn Bureau*
William J. Coughlin ..... *Chief, Moscow Bureau*
Peter Weaver ..... *Chief, Mexico City Bureau*
John Pearson ..... *Chief, Caracas Bureau*
Alicjya Grobtuch ..... *Melbourne*
Raymond Shah ..... *Zurich*
Gene Di Raimondo ..... *Milan*
Plus bureaus and correspondents in 127 major cities throughout the world
Dexter Keezer ..... *Economics Director*

Walter C. McMickle ..... *Advertising Sales Manager*
Thomas Macaluso ..... *Business Manager*
Howard J. Bernard ..... *Circulation & Promotion*
John J. Nevins ..... *Production Manager*
Herbert C. Bagdon ..... *Research*

DISTRICT OFFICES:

ATLANTA 3, William O. Crank, Dist. Mgr., Rhodes-Haverty Building
BOSTON 16, Ralph L. Chisholm, Dist. Mgr., 350 Park Square Building
CHICAGO 11, Richard N. McKelvey, Dist. Mgr., 520 North Michigan Ave.
CLEVELAND 13, Robert Edsall, Dist. Mgr., 55 Public Square
NEW YORK 36, Stokes T. Henry, Dist. Mgr., 500 Fifth Ave.
PHILADELPHIA 3, H. C. Harvey, Dist. Mgr., Six Penn Center Plaza.
PITTSBURGH 22, Lee Cashin, Dist. Mgr., Oliver Building.
WASHINGTON 3, National Press Building.
OTHER OFFICES: Dallas 1; Detroit 26; Los Angeles 14; St. Louis 8; San Francisco 4; London E.C. 4; Paris 7; Bonn; Rio de Janeiro; Buenos Aires; Mexico City; Manila; Tokyo; Bombay; Melbourne E 4; Toronto 4; Frankfurt/Main.

© Copyright 1958 by McGraw-Hill Publishing Co., Inc. (All rights reserved)

TEXTILE WORLD. Henry G. Lord founder. Published monthly, with an additional issue in July, by McGraw-Hill Publishing Co., Inc. PUBLICATION OFFICE: 99-129 North Broadway, Albany 1, N. Y. See panel below for directions regarding subscriptions or changes of address. **EXECUTIVE, SUBSCRIPTION, AND ADVERTISING OFFICES:** 330 West 42nd Street, New York 36, N. Y. **EDITORIAL OFFICES:** 201 East Coffee Street, Greenville, S. C., and 330 West 42nd Street, New York 36, N. Y.

Officers of the McGraw-Hill Publishing Co., Inc.: Donald C. McGraw, President; Joseph A. Gerardi, Executive Vice President; L. Keith Goodrich, Vice President and Treasurer; John J. Cooke, Secretary. Officers of the Publications Division: Nelson L. Bond, President; Harry L. Waddell, Senior Vice President; Ralph B. Smith, Vice President and Editorial Director; Joseph H. Allen, Vice President and Director of Advertising Sales; A. R. Venezian, Vice President and Circulation Coordinator.

SUBSCRIPTIONS are solicited only from executives, engineers, chemists, and technicians in textile manufacturing companies and finishing plants. Position and company connection must be indicated on subscription order. Single copies $1.00. Subscription rates: United States and Possessions and Canada, $2.00 a year; all other countries, $15.00 a year. Second-class postage paid at Albany, N. Y. Printed in U.S.A.

SUBSCRIPTIONS: Address correspondence and change of address to Fulfillment Manager, TEXTILE WORLD, 330 West 42nd Street, New York 36, N. Y. When address is changed, subscribers should give old as well as new address, including postal zone number. Enclose recent address label if possible. Allow one month for change to become effective.

Postmaster . . . Please send form 3579 to Textile World, 330 W. 42nd St., New York 36, N. Y.

TEXTILE BUSINESS

Textile World

NOVEMBER • 1958

THIS MONTH'S HIGHLIGHTS

Production Hits 22-Months High
•
Court Curtails Tariff Powers
•
Wool-Price Decline To Continue
•
1959 Cars Get Good Start
•
Japan To Restrict Wool Exports
•
Mill Sales, Profits Mixed
•
Financing for Small Firms
•
Textile Stocks Perform Well
•
Fall Reorders Roll In
•
Japanese Quota Plan To Continue

Textile Production Hits 22-Months High

Textile production is estimated to have hit a 22-months high last month. The TEXTILE WORLD Index (p. 10) rose to an estimated 110, the highest point since December, 1956, and 14.5% above the recession low of 96 reached in April of this year.

While October figures are tentative and subject to revision next month, spot checks with mills all during October bore out the late production resurgence. Many mills returned to six-day operation in middle and late September.

(The lag between improving production and preliminary figures for estimating the Index has led to a slight underestimate for the last several months. The August estimate of 106 had to be raised to 107 and the September estimate of 107 to 109.)

•

October is usually a peak seasonal production period, and the Index may turn down again in November or December.

As shown on p. 10, the peak in 1955 was reached in December, in 1956 in November and December, and in 1957 in September and October.

So the critical test will come at the turn of the year. It's almost certain that production will ease off somewhat from the present surging activity. Christmas and New Year's holidays alone will cause a dip.

But watch the drop as mills go into spring and summer 1959. An easing off of six to eight Index points will be normal and will not disturb business. A sharper drop will be a bearish sign, a shallower one a bullish sign.

Court Decision Curtails President's Tariff Powers

A significant court decision affecting the escape-clause provision of the Trade Agreements law was made last month by the New York Customs Court.

The Court ruled that the President, under the escape clause, has no power to modify changes in duties recommended to him by the U. S. Tariff Commission. Rather, the Court says, the President can only accept entirely or reject entirely the recommendations. He can't pick and choose, give a little but not all.

Government lawyers are dumbfounded by the decision and will appeal.

The case that produced the court ruling involved bicycles.

The bicycle industry asked for escape-clause action in June, 1954. The Tariff Commission told the President that bicycle duties should be raised from the existing 7½% of value to not less than 22½% nor more than 30%.

The President asked the Commission for more evidence, and

after the Commission reported again in July, 1955, the President approved an increase to only 11½% in August, 1955.

•

In setting aside the 1955 tariff boost, the New York Customs Court made these key points:

- The Commission action took 13 months; so the Commission did not comply with the statutory nine-months time limitation.
- The President, in modifying the rate proposed by the Commission, did not follow statutory language requiring him either to accept or reject Commission recommendations.

Protectionists believe the Tariff Commission generally is more receptive to their pleas than the State Dept. and the President. Therefore they hail the New York ruling. Both Presidents Truman and Eisenhower often responded in the past to pressure for increased tariffs by granting something less than was recommended by the Commission, as Pres. Eisenhower did in the bicycle case.

•

Under the new ruling, high-tariff groups see a chance to win more of the protection they have sought. Political pressures often build up in escape-clause cases and require a president to give some sort of protection to a domestic industry. If the ruling stands, however, the President would no longer be free to compromise and would be hard-pressed to take whatever boost the Commission recommends.

State Dept. officials say the ruling creates a situation that would complicate presidential action. They warn that pressures from countries with U. S. trading pacts would force a president to reject entirely a boost he thought too high, since he no longer could allow a somewhat lower increase.

In effect, that's what happened in the bicycle case.

However, protectionists believe that if the new ruling stands up under appeal, administration of the Commission will be more favorable in the long run than administration by the President has been.

Textile Buildup Starts in Egypt

BEIRUT, LEBANON — Buildup of the textile industry of Egypt in Prime Minister Nasser's five-year industrialization plan is swinging into action.

Two long-term-credit agreements totaling $50-million for machinery and equipment, much of it textile, have been made.

Under the agreements, Japan will give Egypt $30-million credit and East Germany will provide $20-million credit.

The first contract for textile equipment has already been entered into with the Japanese firm Marubeni-Iida Co. of Osaka for 30,000 cotton spinning spindles and parts worth $2-million.

The first shipment of the spindles, made by Toyoda Automatic Loom Co., is expected to leave Japan in February.

Payment will be 20% of the total contract when the cargo is loaded on ship and the remaining 80% in installments over 10 years at 4½% interest.

By the East German agreement complete mills will be delivered to Egypt for payment in 11 annual installments begining one year after delivery at 2½% interest. Plants now planned are:

- Two cotton spinning mills for Assiut and Minia, in Upper Egypt
- A fine woolen-yarn spinning mill
- Spinning and weaving mills in Shubra Kheima and Mehalla Kobra.

Fiber Producers Scored Improved Third Quarter

Man-made-fiber producers racked up a considerably improved third quarter, according to financial reports coming in.

- **Chemstrand Corp.** continued as the standout operation in 1958, with sales for the third quarter of $47,116,000, compared with $39,995,000 in the second quarter—an increase of 17%.

Net earnings for the third quarter were $5,342,000, compared with $4,491,000 in the second quarter—a gain of 18.5%.

Wool-Price Decline Not Likely To Reverse Soon

MELBOURNE, AUSTRALIA—Wool men here see little hope of significant improvement in wool prices soon.

By the middle of last month, prices had declined 12% to 15% since the 1958-59 auction season opened in late August. And it was evident that only buying by Japan and Iron Curtain countries staved off a collapse of prices.

No real improvement is expected until European countries, particularly Britain, step up their buying.

Wool is in strong supply, and prices are said to be below the cost of production.

The Commonwealth's sheep population of 149.7-million is only 100,000 below the all-time high of 149.8-million reached in March, 1957. But seasonal conditions have reduced wool production almost 10%, and the Bureau of Agricultural Economics expects a further drop of about 3% this season.

That would place production at about 1,386-million lbs.

•

Several reasons for the drop in wool prices are given:

• The worldwide slump in textile production and a decline in purchasing power. Many wool men here think that wool demand and prices will improve as soon as world business improves.

• Government experts, however, think that much of the pressure on wool has come about from competition of man-made fibers. In particular, they cite the price stability of competitive fibers as one strong advantage over wool.

Whatever the reason for the drop in demand and prices, wool men favor moves to improve the position of wool. Two steps advocated are:

• A multimillion-dollar campaign to promote the use of wool.

• A campaign to "teach" underdeveloped countries, both Free and Communist, to use more wool.

At the moment, these proposals seem mostly talk generated by present unfavorable market conditions. No one sees much chance for concrete action any time soon.

1959 Auto Sales Off to Good Start

DETROIT—Some segments of the textile industry will enjoy good business with the auto-makers in the 1959-model year.

After a disastrous 1958, in which auto sales are not likely to exceed the country's 4.4-million-cars annual scrappage rate, the automobile industry is moving into the 1959-model sales year with high hopes.

The new models are reported to be drawing "tremendous," in some cases "record-breaking," public interest.

Although crippling labor troubles last month will delay a true market test for a few more weeks, early dealer orders indicate a banner sales year.

•

Here's how some of the makes were faring late last month:

• Buick sales and orders for the first 10 days of the 1959-model life ran 40,140 units, four times the 1958-model rate.

• American Motors booked $203-million in dealer orders, twice last year's sales in the same period. As a result, it has boosted 1959 Rambler production for the fourth time and will turn out 100,000 cars by the end of December.

• Pontiac booked 20,500 units in the first three days, two and a half times last year's record.

• First-day Dodge sales were double last year's.

CONTINUED ON PAGE 6

Net for the first nine months of 1958 was $11,719,000.

• **American Enka,** for the third quarter, reported sales of $14,903,000, compared with $14,683,000 in the same quarter of 1957. However, the 1.5% gain in sales netted a gain in profits of better than 37%—from $109,000, equal to 8¢ a share, in the third quarter of 1957, to $149,000, equal to 11¢ a share in the third quarter of 1958.

For the first three quarters of this year, Enka's sales were up slightly over the same period last year—$42,490,000 this year vs. $42,231,000 last year.

But profits for the year were down —$154,000, equal to 11¢ a share, this year vs. $682,000, equal to 50¢ a share, last year.

• **Industrial Rayon** cut its operating loss significantly in the third quarter. Where the loss for all three 1958 quarters totaled $1.31 a share, loss for the third quarter alone was cut to 72¢ a share.

Industrial's sales for the nine months ran $32,625,073, compared with $43,167,236 for the same period last year.

• **Du Pont** reported steadily improving operations for all three quarters of 1958. Earnings from operations in the three quarters equaled 87¢ a share in the first quarter, 94¢ in the second, and $1.12 in the third.

These quarterly earnings compare with 1957 quarterly earnings of $1.48, $1.54, and $1.51.

New Wool Mill in Poland

BONN, GERMANY — Construction has started on a new wool-goods mill in the Polish textile center of Lodz, according to reports here.

The mill will produce 6-million yds. of wool fabrics a year.

Most of the machinery and equipment will come from East Germany.

New Australian Mills

MELBOURNE, AUSTRALIA—A $2-million expansion program is under way by Davies Coop & Co. Ltd., one of Australia's largest textile groups.

First new production will be at the huge Rydalmere mill in New South Wales, said to be one of the most modern in the world.

At Footscray, Victoria, construction is under way on a 500,000-sq.-ft. building expected to reach production next year.

Fabric Prices Rise

Mill prices advanced on several fabrics last month under the stimulus of mounting demand and production sold into or through the first quarter of 1959.

Dacron-cotton-blend fabrics were upped 2¢ to 3¢ in two stages about the middle of the month, with 88x64 batiste in 65% Dacron and 35% cotton going at 47¢.

Nylon taffetas advanced ½¢ to 1¢ a yd.

Prices held firm or had spotty advances in combed sateens and combed lawns.

Wide industrial fabrics advanced ½¢ to 3¢ a yd., with sales running well into December and in a few cases into January.

Print-cloth prices were mixed. The new 78x78 4.05-yd. 41-in. fabric, steadily gaining favor, held firm at 18¢ for quick delivery; and sales were at a rapid pace. But 80-square, suffering from the shift to 78x78, weakened; and prices quoted at 17⅞¢ to 17¾¢ were being shaded to 17½¢.

New Integrated Mill To Be Built in Russia

MOSCOW—Russia's plans for developing a giant textile industry (TEXTILE WORLD, June, p. 3) got a big boost early last month.

The Alma-Ata Council of National Economy approved the construction of a big integrated operation consisting of two spinning-and-weaving mills and a finishing plant, with the necessary auxiliary facilities. A township of 50,000 population will be built in connection with the new combine in the western part of the capital of Kazakhstan.

Each of the weaving mills will have a production capacity of 31.2-million meters (about 34-million yds.) of cloth a year, or a total of about 68-million yds.

Fabrics will be high-quality worsteds, velvets and velveteens, flannels, calicos, moleskins, and chiffons.

Reports are that the plants will be the first in Russia fully equipped with shuttleless looms and that

• Ford Motor Co. reported a whopping $1-billion sales in the Ford Div. and an additional $143-million in the Mercury-Edsel-Lincoln Div.

• Studebaker's sales by late October were already half the 1958-model total.

●

However, upholstery options have been chopped as much as half by several manufacturers. But the reason for the cut is more in the interest of simpler color schemes than to reduce purchases.

Auto-makers are now convinced that "black 1958" was due as much to a failure on their part to anticipate a swing toward less bulk and chrome and simpler color schemes as to slumping business. So stylists are dumping their wilder upholstery patterns and swinging toward toned-down colors.

Japan To Restrict Wool-Goods Shipments

TOKYO—The Japanese government moved last month to restrict woolen exports to the U. S. In medium- and low-grade woolens, the maximum exports will be 5-million yds. a year.

This voluntary restriction follows the pattern set for cotton goods in early 1957. A spokesman for the Ministry of International Trade and Industry, which announced the plan, said the move is being made to avoid pressure by U. S. dealers for higher tariffs against Japanese woolens.

The 5-million yds. will include 2-million yds. of medium-grade goods and 3-million yds. of low-grade goods. Quotas for Japanese exporters will be based on their sales in the 1954-57 period.

High-grade woolens are not affected, but shipments must be approved by MITI.

Operating Statements Show Mixed 1958 Sales and Profits

The spotty performance of mills revealed in earlier operating statements continues in the statements now coming in.

• **Indian Head Mills,** whose position was considerably improved by acquisitions now being reflected in statements, is turning in a sparkling 1958 performance.

For the third quarter ended Aug. 30, 1958, sales were $10,225,000, compared with $4,397,800 in the same 1957 period. Profits were $558,600, compared with $310,800. But the improved operation is shown by the per-share earnings—$1.87 in the 1958 quarter, compared with $1.10 in the 1957 quarter.

For the nine months ended Aug. 30, 1958, sales were $30,080,500 vs. $14,805,800 in the 1957 period. Profits were $1,696,800, equal to $5.69 a share of common stock, vs. $1,010,800, equal to $3.63 a share.

• **The Kendall Co.** reported a 12-weeks period ended Sept. 6 almost even with the same period in 1957.

Sales were $24,013,000 vs. $24,108,000 in the 1957 period, and earnings were $714,000 vs. $734,000.

For the first 36 weeks of 1958, sales ran $69,212,000 vs. $73,505,000 in the 1957 period. Earnings ran $2,156,000, equal to $2.01 a share of common stock, vs. $2,399,000, equal to $2.25 a share last year.

• **West Point Mfg. Co.,** in the fiscal year ended Aug. 30, had a 10% drop in sales and a 27% drop in net.

Sales were $116,093,190 vs. $128,504,375 in fiscal 1957. Net profit was $3,278,965, equal to $1.08 a share, vs. $4,511,373, equal to $1.49 a share last year.

Small Business Firms To Get Better Financing

Some of the bitterness against the government felt by many in the textile industry boiled over last month on a government representative bearing alms.

A representative of the Small Business Administration, an agency set up to help small business firms, appeared at the Greenville Show to feel out the pulse of suppliers and mill men about SBA help in financing growth and modernization programs.

But he got nowhere.

As soon as someone whose pulse he hoped to feel understood that he came from "some government bureau," pent-up resentment overflowed. To almost no one was he able to explain his mission.

•

It is doubtful that one in 10 of the men talked to were acquainted with the Small Business Investment act passed by Congress this year to aid small firms financially.

This act may be the most important development of many years in business finance.

Congress authorized a revolving fund of $250-million for the Small Business Administration to use in creating a new set of financial institutions to be known as Small Business Investment Companies.

These institutions will provide small companies with long-term capital at reasonable rates of interest. In general, they will make loans of $25,000 to $100,000 for terms up to 20 years at interest rates considerably lower than rates now charged by financial institutions.

SBA defines as small a manufacturing firm with less than 250 employees, although in some large industries a plant could qualify as small with up to 1,000 employees.

Money for the investment companies will come partly from nearly a third of the total equipment will be completely new to the textile industry.

The combine is scheduled to be completed and go into production in 1965.

Rayon Shipments Up Again in September

Man-made-fiber shipments, excluding acetate staple and tow, amounted to 87.1-million lbs. in September, the Textile Economics Bureau announced.

That is an increase of 500,000 lbs. over the 86.6-million lbs. shipped in August but 2½% under shipments in September, 1957.

Domestic shipments amounted to 85.1-million lbs., up 400,000 lbs. over the 84.7-million lbs. shipped to domestic users in August.

Export shipments in September amounted to 2-million lbs., compared with 1.9-million in August.

Imports in July amounted to 107,000 lbs., a 36% drop from the 167,000 lbs. imported in June.

For the first seven months of 1958, imports of noncellulosic staple amounted to 875,000 lbs., up sharply from the 289,000 lbs. imported in the first seven months of 1957.

Department-Store Sales Now Level With 1957

Department-store sales came level with last year for the first time in 1958 in the January through mid-October period. Sales reached 1% below by mid-September after running 2% to 3% below last year's sales for most of the year. By mid-October, the 1% less was wiped out.

For the four-weeks period ended October 18, all of the 12 Federal Reserve Board districts ran level with or above the corresponding period last year.

The Chicago district and the San Francisco district were even with sales last year for the same period, and the other 10 districts were from 1% to 8% above last year.

Boston and New York were up 8%, Philadelphia and Dallas 6%, Atlanta, Kansas City and St. Louis 5%, Richmond 4%, and Minneapolis and Cleveland 1%.

For the four-weeks period, the U. S. total was up 3%.

Poland Is Modernizing Its Outmoded Industry

VIENNA, AUSTRIA — Poland is drastically stepping up its development of a textile industry to supply better-quality domestic textiles and to build up its exports.

Approval has been given for the purchase of $1-million worth of textile machinery from Great Britain and $180,000 worth from France.

A study published last year cited the obsolescence of Poland's machinery as:

- **Built prior to 1900:** 25% of the cotton spinning frames, 32.6% of the cotton looms, 45.8% of the finishing machines.
- **37 to 57 years old:** 32.6% of the cotton spinning frames, 31.7% of the cotton looms, and 25.4% of the finishing machines.
- **Built between World Wars I and II:** 20.5% of the cotton spinning frames, 31% of the looms, and 19.8% of the finishing machines.

The machinery now on order includes 22,000 cotton spinning spindles from Britain for the Czenstochowa mills, where productivity is expected to double, and high-production man-made-fiber cards from France.

The factory at Chodakow will receive in the next two years modern equipment from the U. S. for a new spinning department; and at Wroclaw, the mill is expected to increase the production of spun man-made-fiber yarns 80%.

Women's-Wear Fabrics Now in Short Supply

Cutters and retailers who played business too close to the chest are now threatened with a squeeze on deliveries of wool fabrics and apparel, the Wool Bureau reports.

Mill new orders for fabrics for women's wear have been rising sharply week by week from the first quarter through the third quarter of this year.

Many mills are now under delivery pressure; and if garment sales continue as they have been going since early fall, many items now in short supply will be available to consumers only on a spotty basis.

the government, but private sources will furnish most of it. Banks and investment companies probably will set up many of them as subsidiaries of the present companies. At least $300,000 of paid-in capital, at least $150,000 of which must be put up by private investors, must be put up to establish a Small Business Investment Company.

●

The SBI loans are intended to help "under-capitalized growth firms." They are not intended to help just any small firm that gets caught short of cash.

Most of the loans are likely to go for machinery and equipment. However, in some cases the loans may be made for small-scale construction or operating capital.

In the end, the Small Business Investment Companies will be in business to invest capital and make a profit. Small firms that are approved for loans will have to show that they are good capital risks.

But the SBIC program will fill a financing gap. It will provide some place for a promising small business to obtain a reasonable amount of long-term, low-interest capital for growth and expansion.

Textile Stocks Double Dow-Jones Industrials Average

Textile stocks continued their brilliant 1958 performance in the roaring fall stock market.

While the Dow-Jones Industrials average rose to a high 23.2% above the 1958 low, Barron's textile group soared 48.3% above the 1958 low, more than double the Industrials average.

Here's how some of the individual issues have performed:

Issue	1958 high	1958 low	% change
American Enka	24	14	71.5%
American Viscose	35	25	40.0
Bigelow-Sanford	12	7	71.5
Burlington Industries	14	9	55.5
Cannon Mills	65	47	38.4
Celanese	23	12	91.0
Cone Mills	16	9	77.7
Dan River	13	9	44.5
Duplan	12	6	100.0
Indian Head Mills	29	15	93.4
Johnson & Johnson	112	85	31.8
James Lees	31	25	24.0
Mohasco	10	4	150.0
Mojud	12	8	50.0
Munsingwear	25	17	47.0
Pacific Mills	29	20	45.0
Reeves Bros.	11	6	83.2
J. P. Stevens	26	17	53.0

Textile-machinery-manufacturers' issues also joined the upward race. Here's how some of the big ones were faring:

Draper Corp.	18	13	38.4
Saco-Lowell	15	9	66.6
Universal Winding	13	7	85.6
Veeder-Root	52	38	37.0
Whitin Machine Works	17	13	30.8

Fall Reorders Roll In

Store recorders for popular fall lines of clothing stepped up last month as retailers' caution began to melt a little under the spell of surging fall and winter sales.

With 1958 department store sales level with last year by Oct. 18 and chain-store sales up 3½% for the year, buyers were in the market for repeat shipments of dresses, coats, sweaters, blouses, suits, tights, and sportswear.

Some of the most popular items, such as bulky knitted sweaters, were in tight supply.

Japanese-Quota-Plan Review Will Bring Few Changes

WASHINGTON—Japan is not likely to insist upon radical changes in the existing textile-export-quotas plan when negotiations at this year's review of the system gets under way this month.

Industry leaders in Osaka, textile center of Japan, last month proposed a 20% increase in the over-all cotton-goods quota and will put pressure on the government to push for the increase. But the government is expected to resist.

Japanese business and government circles are increasingly aware of the importance to Japan of the American market and of maintaining good trade relations with the U. S. They will try hard to avoid any move that might provoke retaliation.

Japanese negotiators will press for some changes in the system to make allowances for market growth during the past year. They also will try to obtain greater flexibility to shift unused quotas to other categories within the over-all ceilings. Technical changes of this nature that would be of some importance to specific industries might be made.

But the Japanese will be careful. Some Congressmen are still dissatisfied with the idea of quotas controlled by Japan and continue to push for compulsory quotas that are administered by the U. S.

U. S. officials are reasonably satisfied with the present setup and believe that the U. S. textile industry is too. So U. S. negotiators are more than willing to leave things pretty much as they are.

But men's-wear fabrics are not under the same pressure.

Since the first quarter, these fabrics have suffered a slight decline in weekly new mill orders.

The Bureau thinks this condition might be due to imports. Under the protection of the Geneva Reservation, there is always a rush in the early part of the year to get imports in before the cut-off point at which tariffs rise (July 2 this year).

From January through April, imports of wool-apparel fabrics were 34% higher than in the same period in 1957. The Bureau thinks most of these imports were men's-wear fabrics.

If that is the case, imports plus domestic production of men's-wear wool fabrics probably equaled the 70-million yds. of women's-wear fabrics available in the first six months of 1958.

However, stores report a much stronger run on women's wear than on men's wear.

This pattern developed early in the fall season as retailers found their stocks of women's dresses, coats, sweaters, suits, and sportswear too thin to maintain sales.

Since then the pattern has held.

Some improvement in mill sales of men's- and boys'-wear fabrics set in in late weeks, particularly for spring 1959 goods. Some mills report production sold through the end of the year.

However, the current low price of wool and the lack of any real pressure on delivery of men's coatings and suitings are holding prices steady.

Russian Mills Score Big Seven-Year Gains

MOSCOW—Russia's progress in textile manufacturing was cited in an article in Moscow News written by Nikolai Chesnokov, chief of the light-industry department of the state planning committee, last month.

Chesnokov wrote: "Here are several figures showing the increase in consumer-goods output and the swift development of light industry. We shall take for comparison the output of fabrics (millions of meters), comparing the 1950 and 1957 figures with the estimated output for 1965."

The figures given by Chesnokov were:

	1950	1957	1965
Woolens	155	283	500
Cottons	3,899	5,593	8,000 (nearly)
Linens	282	426	over 600
Silks	129	805	1,485

Index of manhours worked in the textile industry adjusted for changes in productivity

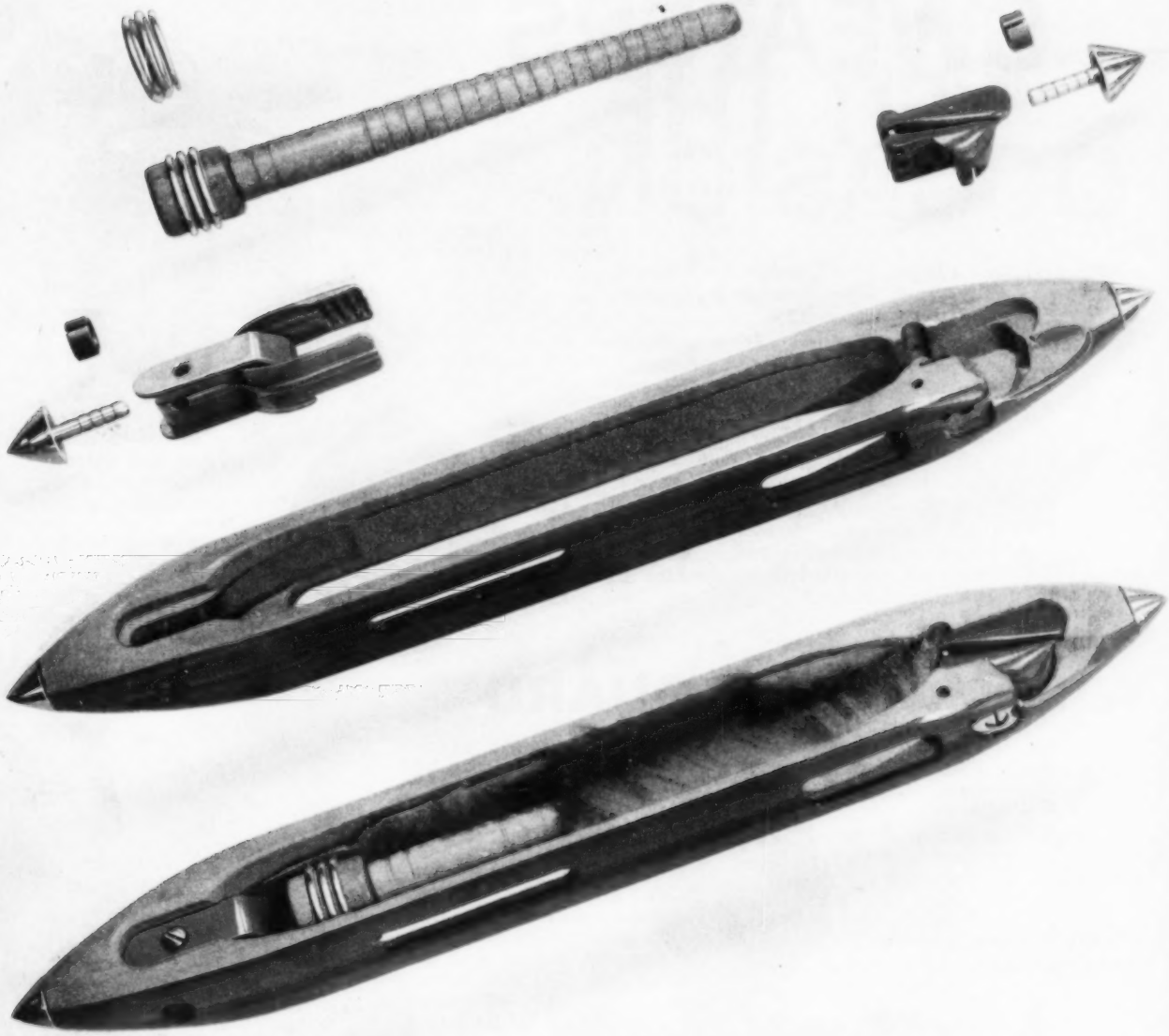
Textile World's Monthly Indicators

	Latest Month	Previous Month	Year Ago
Textile World's Index (1954=100)	**110**	**109**	**109**
Employment (thousands) B.L.S.	948.0	946.7	1004.6
Production Workers (thousands) B.L.S.	857.6	855.8	913.1
Weekly Earnings B.L.S.	$60.10	$59.34	$59.04
Hourly Earnings B.L.S.	$1.51	$1.51	$1.51
Weekly Hours Worked B.L.S.	39.8	39.3	39.1
Production Index (1947-1949 = 100) F.R.B.	104	103	101
Wholesale Price Index (1947-1949 = 100) B.L.S.	93.3	93.3	95.4
Manufacturers' Sales (million $) Commerce	1,086	1,061	1,072
Manufacturers' Inventories (million $) Commerce	2,535	2,550	2,649
Inventories-to-Sales Ratio	2.33	2.40	2.47
Exports (million $) Commerce	105.3	106.0	110.6
Imports (million $) Commerce	75.7	66.0	86.3
Stock Price Index (1941-1943 = 10) Standard & Poor's	23.30	22.58	19.81
Failures (number) Dun and Bradstreet	2	11	3

National Economic Indicators

	Latest Month	Previous Month	Year Ago
Industrial Production (1947-1949 = 100) F.R.B.	137	136	144
Consumer Prices (1947-1949 = 100) B.L.S.	123.7	123.9	121.0
Wholesale Prices (1947-1949 = 100) B.L.S.	119.1	119.1	118.0
Population (millions) Census	172.0	171.7	174.6
Unemployment (millions) Census	4.1	4.7	2.6
Employment (millions) Census	64.6	65.4	65.7
Personal Income (billion $) Commerce	357.5	356.1	351.4

For more data, circle A-1 on Reader Service Card →

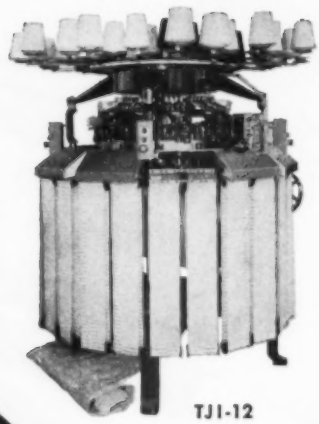


PLANNED QUALITY! Quality doesn't just happen at Draper . . . it is the result of careful planning and engineering. Each part, regardless of size, shape, or material, is designed to do a specific job in the best possible manner. New parts, *as illustrated above*, are constantly being developed to increase your mill efficiency and profits. *See your Draper representative today* for cost-saving parts and mechanisms.

DRAPER CORPORATION

HOPEDALE, MASS. • ATLANTA, GA. • GREENSBORO, N.C. • SPARTANBURG, S.C.

SWEATERS FIT THE OCCASION



TJI-12

Whether it be on the golf links – for business or evening wear . . . sweaters are fashionable accessories in any wardrobe.

A variety of styles knitted in either synthetic or natural fibers make fine sweaters acceptable all day long.

The Circular Jacquard TJI-12, fully automatic circular knitting machine, offers the largest pattern range of knitted fabrics. Knit-on cuffs are a quality feature and pattern cards permit any design regardless of length, width or placement.

Additional mechanical features make the TJI-12 the most versatile knitting machine in the outerwear field today.*

For complete information write:

WILDMAN/JACQUARD

a subsidiary of Draper Corporation, Hopedale, Mass.

WILDMAN JACQUARD CO.
1210 Stanbridge St.
Norristown, Pa.

All day long . . .
sweaters belong!

**Half hose illustrated were knitted on a Hemphill BANNER machine . . . another quality Wildman Jacquard product.*

Abney Mills, Greenwood, S. C., is building two additions to its Renfrew Bleachery, Travelers Rest, S. C. At a cost of $250,000, the company is building a 193x-153-ft. cloth room, extending the bleach plant by adding 203x44 ft., and equipping both additions with new equipment.

Aileen Mills Co., Biscoe, N. C., plans to build a 36,000-sq.-ft. addition that will provide greater weaving and processing capacity. The plant manufactures yarn and cotton bedspreads.

Berkshire Hathaway, Inc., Providence, R. I., is liquidating two of its plants: the No. 4 Plant in Adams, Mass., and the Fort Dummer Div., Brattleboro, Vt.

Callaway Mills Co., LaGrange, Ga., is building a warehouse and office building in the Brook Hollow industrial section in Dallas, Tex. The 12,000-sq.-ft. brick building will serve as the company's Southwest distribution point for carpets.

Central Yarn & Dyeing Co., Gastonia, N. C., is building a 21,000-sq.-ft. addition, part of the company's $250,000 modernization program. The building, to be completed the first part of December, will provide space for new materials-handling methods and enlarged laboratory facilities.

Cold Spring Dyeing & Processing Co., Beacon, N. Y., has changed its name to Cold Spring Dyeing & Processing Corp. Joseph Deluccia will continue as president of the new corporation; and Ben W. Schwartz, vice president and treasurer, has become a co-owner.

Dan River Mills, Inc., Danville, Va., has installed a $1-million, electronic data-processing system that includes 17 separate IBM machines and a 45-ton air-conditioning unit.

Durham Spinning Mills, Durham, N. C., has ceased operations. All buildings, machinery, and supplies are for sale.

Fieldcrest Mills, Inc., Spray, N. C., has bought the capital stock and assets of Nye-Wait Co., Inc., Auburn, N. Y., a carpet firm. The company will operate as a wholly owned subsidiary. Harold H. Fonda, vice president of manufacturing at Fieldcrest, will direct the operation in Auburn. Sales agent will be Karastan Rug Mills, a division of Fieldcrest, Leaksville, N. C.

Great Falls Bleachery & Dye Works, Inc., Somersworth, N. H., has bought the continuous-bleaching range formerly at Paramount Printing & Finishing Co., Pawtucket, R. I. The company plans to have the new unit in operation by Jan. 1.

The Kendall Co., Boston, Mass., will use the former Abbott Worsted Co.'s plant in Seneca, S. C., to manufacture elastic goods. Part of the production currently handled by the company's Rockford and Chicago, Ill., and South Bend, Ind., plants will be transferred to the Seneca plant.

Master Dyeing & Finishing Co., a new company in Woonsocket, R. I., has leased the buildings, machinery, and equipment comprising a dyeing and finishing unit from Lippitt Worsted Mills, Div. of Bell Co., also in Woonsocket. The new company will operate as a commission house on dyeing and finishing of natural and man-made-fiber fabrics.

McGregor Hosiery Mills Ltd., Toronto, Ont., has built a warehouse and office building.

Minette Mills, Inc., Grover, N. C., is planning to build a 26,000-sq.-ft. addition.

Palmetto Yarn Mills, Pageland, S. C., has been bought from Massachusetts Mohair Plush Co. by Palmetto Yarn Mills, Inc., a newly organized company that is owned by interests affiliated with Textile Banking Co. The new owner will continue operations at the present.

E. S. Parkhurst & Co., Gloversville, N. Y., has been sold to G. Levor & Co., Inc., New York, N. Y., for an undisclosed amount. Parkhurst will continue to act as selling agent for the by-products.

Max Pollack Co., Inc., Groton, Conn., a subsidiary of Threads, Inc., Gastonia, N. C., is moving to Gastonia.

Postex Cotton Mills, Inc., Post, Tex., is building a 15,000-sq.-ft. addition to the plant's sewing room and finishing plant. Scheduled for completion by Dec. 1, the expansion will allow for the installation of eight more fitted-sheet sewing machines in the sewing room and the company's first compressive-shrinkage machine.

Russell Mfg. Co., Alexander City, Ala., has completed the first step in its weave-room modernization program. The company has finished a complete change-over in spinning with new drafting units throughout. New combers and reworked carding and drawing equipment have been installed. Model-E looms, widened to 50 ins., will replace 36- and 40-in. Model-E looms. All the looms are equipped for use with an automatic drawing-in machine. Older unit fluorescent lighting will be replaced with continuous-strip lighting, and a new air-conditioned drawing-in room is being built.

Standard Knitting Mills, Knoxville, Tenn., has obtained a permit for a $25,000 addition to its fourth floor.

E. J. Snyder & Co., Ware, Mass., has curtailed its operations in Ware temporarily and is concentrating its activities at its Albemarle, N. C., plant.

Troxler Hosiery Co., Inc., Greensboro, N. C., has received a certificate of incorporation. Principal incorporators are E. E. Boone, Jr., L. T. Hoyle, and June L. Lanier, all of Greensboro, N. C.

U. S. Rubber Co., Hogansville, Ga. is expanding its three plants there. New machinery will be installed in the Asbeston Mill over the next three years, and about 25 people will be added to the present 120.

CALENDAR

November

AATT, Della Robbia Room, Vanderbilt Hotel, New York, N. Y., Nov. 5

Textile Seminar, sponsored by University of Georgia, Div. of Clothing and Textiles in Extension, Teaching, Research, Georgia Center for Continuing Education, Athens, Ga., Nov. 7 & 8

Georgia Textile Operating Executives, fall meeting, A. French Textile School, Georgia Institute of Technology, Atlanta, Ga., Nov. 8

Conference on Radiation and High-Temperature Behavior of Textiles, sponsored by the New York Academy of Sciences, Polytechnic Institute of Brooklyn, and U. S. Navy Clothing and Textile Research Laboratory, Hotel Barbizon Plaza, New York, N. Y., Nov. 14 & 15

Southern Textile Association, Eastern Carolina Div., fall meeting, North Carolina State College, Raleigh, N. C., Nov. 15

Narrow Fabrics Institute, annual meeting, Hotel Roosevelt, New York, N. Y., Nov. 17 to 19

December

23rd National Exposition of Power & Mechanical Engineering, New York Coliseum, New York, N. Y., Dec. 1 to 5

AATT, Della Robbia Room, Vanderbilt Hotel, New York, N. Y., Dec. 3

AATCC, Northern New England section, Hotel Vendome, Boston, Mass., Dec. 5

Southern Textile Association, Piedmont Div., fall meeting, Johnston Memorial Y.M.C.A., Charlotte, N. C., Dec. 6

1959

January

AATT, Della Robbia Room, Vanderbilt Hotel, New York, N. Y., Jan. 7

AATCC, Northern New England section, Colonial Club, Lynnefield, Mass., Jan. 16

Plant Maintenance & Engineering Show, Public Auditorium, Cleveland, Ohio, Jan. 26 to 29

February

AATT, Della Robbia Room, Vanderbilt Hotel, New York, N. Y., Feb. 4

March

AATT, Della Robbia Room, Vanderbilt Hotel, New York, N. Y., March 4

American Society of Mechanical Engineers, Textile Engineering Div., annual spring meeting, Clemson House, Clemson, S. C., March 12 & 13

American Cotton Manufacturers Institute, annual convention, Palm Beach Biltmore Hotel, Palm Beach, Fla., March 19 to 21

Textile Quality Control Association, spring meeting, North Carolina State College, Raleigh. N. C., March 26 & 27

April

AATT, Della Robbia Room, Vanderbilt Hotel, New York, N. Y., April 1

The Fiber Society, Inc., spring meeting, Fontana Village, N. C., April 29 & 30

May

Knitting Arts Exhibition, Atlantic City Auditorium, Atlantic City, N. J., May 4 to 8

National Association of Hosiery Manufacturers, annual meeting, Claridge Hotel, Atlantic City, N. J., May 4

Underwear Institute, annual meeting, Hotel Traymore, Atlantic City, N. J., May 5

AATT, Della Robbia Room, Vanderbilt Hotel, New York, N. Y., May 6

Tufted Textile Manufacturers Association, annual convention, cruise to Nassau from Savannah, Ga., May 8 to 13

Cotton Research Clinic, sponsored by the National Cotton Council, Grove Park Inn, Asheville, N. C., May 12 to 14

June

AATT, Della Robbia Room, Vanderbilt Hotel, New York, N. Y., June 3

Material Handling Institute's Exposition, Public Auditorium, Cleveland, Ohio, June 9 to 12

1960

May

American Textile Machinery Exhibition, Atlantic City, N. J., May 23 to 27

October

21st Southern Textile Exposition, Textile Hall, Greenville, S. C.

THREE MACHINES . . .
TOP-QUALITY PRESSED ROLLS

Butterworth *DURA-SMOOTH* Rolls play a vital part in the finishing end of the textile industry. The right roll for the job . . . the right material . . . the right degree of hardness and smoothness . . . all contribute to economical finishing and uniform quality control.

For example, in a Butterworth Water Mangle, pressures up to 15 tons require Butterworth *DURA-SMOOTH* special rolls, designed for heavy-duty service and long, trouble-free operation.

In a Butterworth Embossing Calender, Butterworth *DURA-SMOOTH* Rolls provide uniform embossing characteristics, with no variation from lot to lot. That's because all Butterworth Rolls are quality-controlled at every step in manufacture.

And in a Butterworth Calender, pressures are accurately adjusted to each side of the roll, for even pressures across the face. Butterworth *DURA-SMOOTH* Rolls never loosen or slip . . . they're locked on a forged steel shaft under controlled pressure.

New or refilled, there's a Butterworth *DURA-SMOOTH* Roll for every finishing need. Call or write today for a quotation on your requirements.

H. W. BUTTERWORTH & SONS COMPANY

Bethayres, Pennsylvania **187 Westminster Street, Providence, R. I.**

Division of Van Norman Industries

Representatives in Principal Cities of the World

Machines for Bleaching, Boiling-Out, Dyeing, Mercerizing, Finishing, Embossing, Pot Spinning Machines for Synthetic Fibers : : Calender Rolls : : Tenter Chains

BUTTERWORTH
Serving the Textile Industry Since 1820

MODERN DYEHOUSE EQUIPMENT

THE DEPENDABLE KWG SKEIN DYEING MACHINE

KWG Double Reel Skein Dyeing Machine —all stainless steel unit built in capacities to 1000 pounds.

FOR QUALITY DYEING

WITHIN INCREASED BUT MORE NORMAL TEMPERATURE and PRESSURE LIMITS

Perfection in dyeing—for natural and the new synthetic fibers—is yours with KWG Skein Dyeing machines. Rugged construction . . . improved **'Ferris-Wheel' performance . . . give you the penetration and evenness of color**—the permanence of tone—for that extra measure of sales appeal—without concern for costly high-temperature, high-pressure methods. Dual-operations possible including scouring, dyeing and shrink-proofing, or scouring, bottom bleaching and dyeing of pastel shades.

You can point the way to extra sales . . . extra profits . . . today by writing Klauder Weldon Giles. A KWG representative will be glad to survey your needs. If necessary, he'll design special equipment to your specifications. There's no obligation.

Klauder Weldon Giles MACHINE COMPANY

ADAMS AVENUE & LEIPER STREET • PHILADELPHIA 24, PA.

ROUND TABLE

Letters From Readers

We welcome your comments. Whether you agree or disagree, with us or anybody else, we will be glad to have you air your views.

Unless you ask us not to, we will use your name and company connections when your letter is printed. If you prefer to have your opinions appear unsigned, we will respect your confidence by using only a set of initials.

Write to Editor, Round Table, TEXTILE WORLD, 201 E. Coffee St., Greenville, S. C.

READER LIKES OUR NEW PRESENTATION

Dear Editor:

While on a special mission in Uruguay with the Uruguayan Government, I have been reading every new issue of TEXTILE WORLD with great interest. I want to congratulate you on the new TEXTILE WORLD.

I find the excellent and informative presentation very valuable here, where I want to be informed not only about specific technical problems but about the whole textile situation.

VICTOR SAXL

Montevideo, Uruguay

FIBER-CONTENT LABELING WILL COST MONEY

Dear Editor:

Now that the fiber-content law is on the books, mills, converters, and garment manufacturers will have to add a little bit more to the costs of textiles in order to pay for the administrative expense that the law will add to their operating costs.

Just how much value the law will have for the consumer is a moot question, but one thing is certain: he'll have to pay for this insurance that he knows what he is getting.

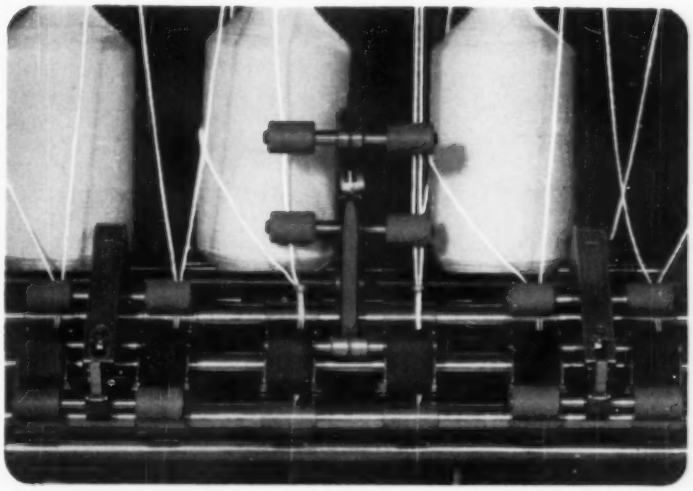
Every manufacturer of textile-fiber products must keep records of the fiber content of his production for three years, according to the Act. The complications that can ensue when you think of the multiple avenues by which manufactured textile goods reach the consumer stagger the imagination. The extra work involved in labeling each item and, in multi-unit packages, relabeling all items left in a broken package that had had one label for the dozen or half-dozen originally packaged is going to cost someone.

That someone is the consumer. We've lost steadily in the race for a

THE MOST SENSIBLE ANSWER TO GADGET-FREE TOP ROLL SUSPENSION

ROBERTS *PosiWate* SUSPENSION SYSTEM

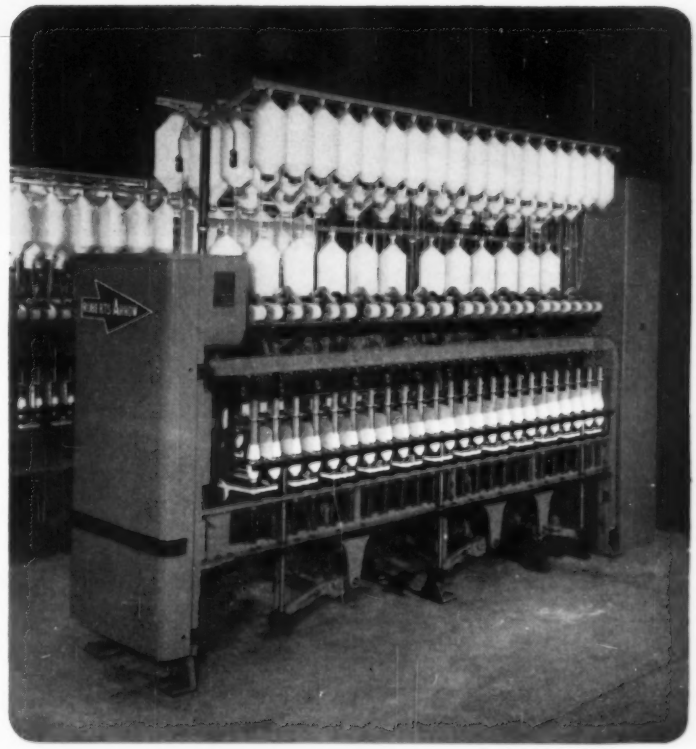
Elegantly simple, the Roberts PosiWate Top Roll Suspension System is completely free of hooks, unpredictable short springs and other gadgets. PosiWate recovers the best features of positive weighting and weight distribution used and proven in several million spindles insuring uniform performance from spindle to spindle.



A FEATURE OF

ROBERTS ARROW

ALSO AVAILABLE AS
CHANGE-OVER MODERNIZATION
ON ANY MAKE OF FRAME



Very Advanced

ARROW SPINNING features:

- PosiWate Top Roll Suspension
- UnaRing Balloon Control
- EvenGrip Fluted Bottom Rolls
- Roberts Ball Bearing Spindles
- Double-Apron High Draft System
- UnitVac Power-Suction Cleaning
- Roberts All-Ball-Bearing Head
- UniTized Sectional Frame
- AeroCreel with Latch-Type Bobbin Holders
- Flexibility For Cotton And Synthetics

ROBERTS COMPANY
SANFORD, NORTH CAROLINA

For more data, circle A-5 on Reader Service Card

New label stays put on natural or synthetic fabrics

...and peels off clean!

Here's a label that stays put on virtually any fabric — knitted or woven, natural or synthetic! New TEX withstands repeated flexing and handling . . . ensures the brand identity and attractive point-of-sale appearance of everything in your line. And TEX labels peel off clean . . . leave absolutely no trace of adhesive residue. Heat sensitive, these all-purpose labels can be easily applied during pressing (steam or dry) or with a hand iron. Label moistening is eliminated . . . no glue smears from operators' fingers. Ask your printer about the new TEX labels for textiles. Or write for sample sheets.

NASHUA Corporation NASHUA

Dept. TW-118, 44 Franklin Street, Nashua, N. H.

fair portion of the consumer's dollar. It isn't logical to assume that we're going to gain any ground by increasing the cost of textile products. It is doubtful if most consumers will pay much attention to the labels any way, and certainly they won't appreciate paying more money for textile products.

Maybe this is progress. It surely is going to make more jobs for bookkeepers.

P. W. R.

New York, N. Y.

ASBESTOS INFORMATION

Dear Editor:

TEXTILE WORLD has done a fine job in preparing the 1958 Fact File. While your information on cotton and man-made fibers is very complete, the article on asbestos textiles is not as accurate as we would wish.

The weight range and the thickness range is not in keeping with industrial standards. For example, the most popular weight is about 40 oz., and the popular gauge is about 0.062 in.

J. H. S.

Charleston, S. C.

HEAT AND OVERGINNING ARE HURTING COTTON

Dear Editor:

The idea we often hear expressed is that mills will pay a premium for higher grades of cotton and therefore any device that raises cotton grades is to the advantage of the mill.

The gimmick in this thinking lies in the damage done to the cotton by both high heat and overmachining. Too many times we have checked out various methods of ginning, and in every check we have proved beyond a shadow of a doubt that the heating and overginning are ruining the cotton for the mills; and sooner or later mills will be compelled to go to rayon or some other synthetic fiber.

Don't you think Du Pont realizes the potential market available when cotton annually fouls up the mills, causing a high labor cost, ends down, and bad feelings all through the mill?

Last spring at Charlotte, N. C., the various man-made-fiber manufacturers held a meeting that was better attended than any meeting I've been to in the last several years, all for the purpose of discussing blends of one-third rayon and two-thirds cotton for print cloth.

The gins are putting the farmer out of business as fast as they can install beaters and lint combers.

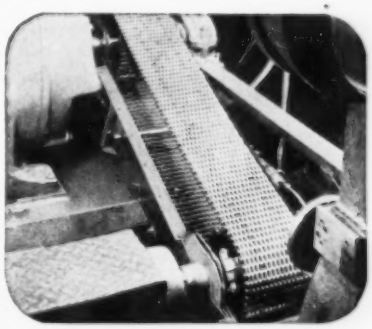
J. L. D.

Joanna, S. C.

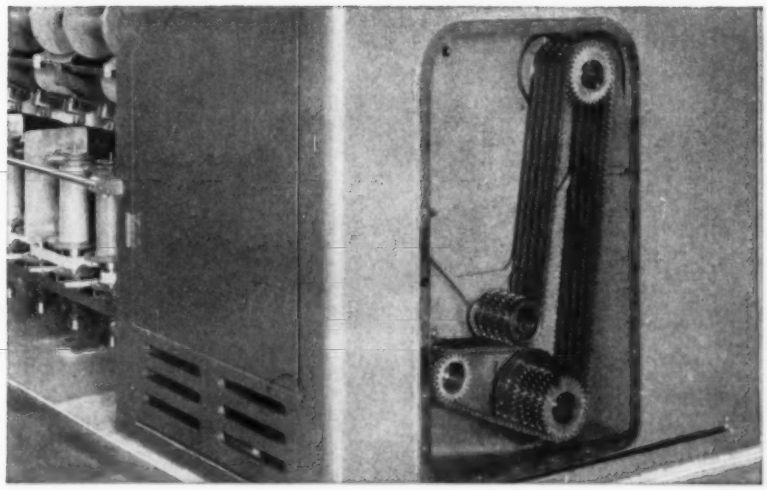
For more data, circle A-6 on Reader Service Card

How LINK-BELT silent chain comes through industry's stiffest tests

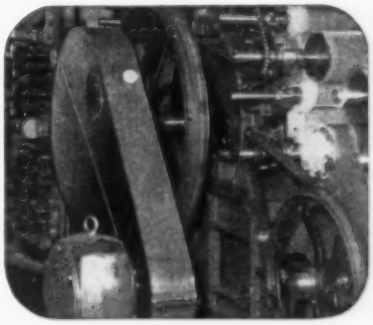
No other drive can do the same



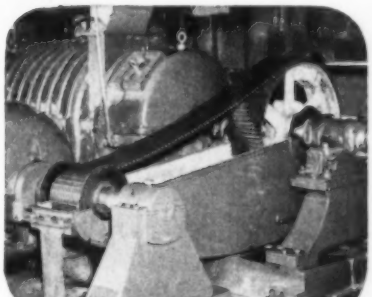
HIGH SPEED. Link-Belt silent chain drives often operate at speeds of 4000 to 5000 feet per minute.



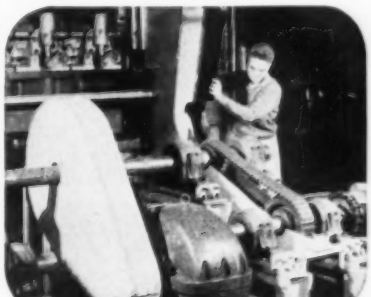
REVERSE ROTATION OF SHAFTS. Link-Belt duplex silent chain — capable of driving from either side of chain — operates multiple shafts on this uptwister. On fixed center drives, proper chain tension is maintained with an adjuster.



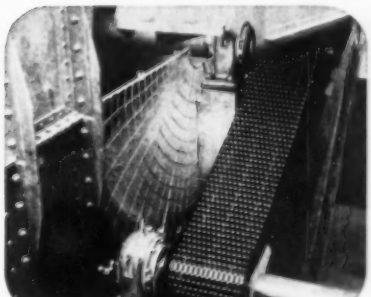
ADVERSE OPERATING CONDITIONS. Effects of heat, humidity and cold are minimized with Link-Belt silent chain drives.



LARGE RATIOS. Link-Belt silent chain operates efficiently at ratios as high as 10-to-1, with resulting space economies.



LIMITED SPACE. Easy to assemble in close quarters, Link-Belt silent chain permits built-in drives, compact housings.



LONG LIFE. Link-Belt silent chain has given more than 30 years of uninterrupted service on ventilating systems.

Ask your Link-Belt office or authorized stock-carrying distributor for

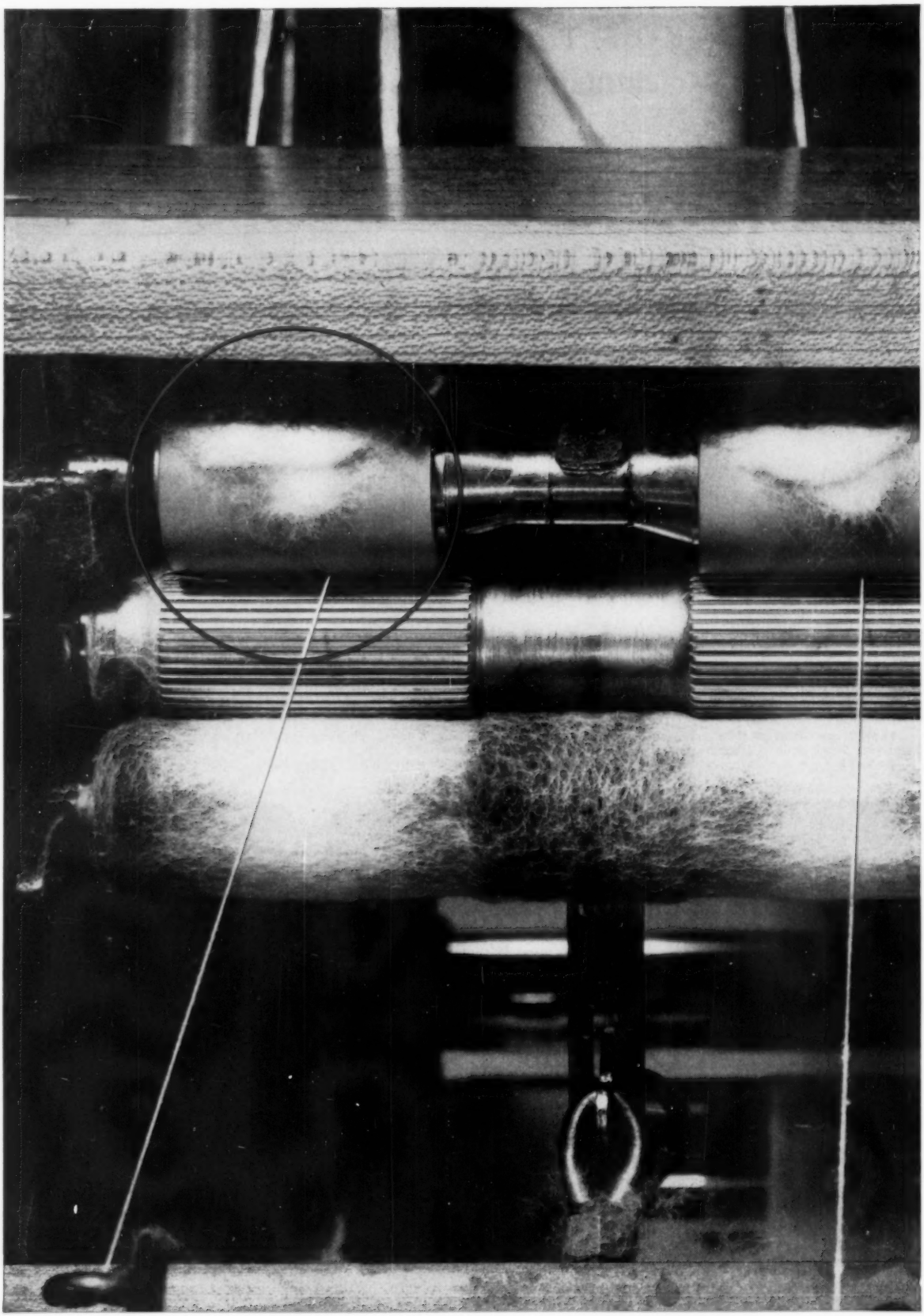
88-page Book 2425

LINK-BELT

SILVERSTREAK SILENT CHAIN DRIVES

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville, N.S.W.; South Africa, Springs. Representatives Throughout the World. 14,015

For more data, circle A-7 on Reader Service Card



For more data, circle A-8 on Reader Service Card

eliminate eyebrowing

Accotex anti-static cots help prevent serious eyebrowing and reduce waste formation.

When you see eyebrows forming on your flat clearers, you can usually put most of the blame on the spinning roll. Hundreds of mills have virtually eliminated this problem by equipping their frames with NC-762 Accotex Cots.

NC-762 is one of the new anti-static roll covers developed by Armstrong textile research. This new cot has an exclusive "constant-friction" surface that has just the right amount of bite needed to pick up loose fibers — and pack them well back under the clearers. In addition, many mills report substantial reductions in the total amount of waste formed where NC-762 Accotex Cots are used.

As a result of this superior performance, NC-762 Cots provide maximum eyebrow resistance. They'll help you maintain high production of top-quality yarn by keeping to a minimum yarn irregularities caused by eyebrowing.

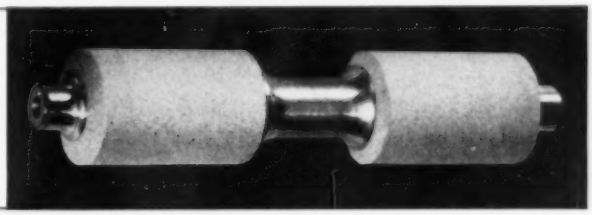
Like all Armstrong roll covers, NC-762 Accotex Cots are compounded to give long service life as well as excellent spinning performance. With just an occasional re-buffing (as seldom as once a year), these covers will turn out clean, uniform yarn shift after shift, for years.

In the card room, Armstrong NC-762 Accotex Covers give the drafting qualities and eyebrow resistance needed for drawing and roving frames equipped with flat clearers.

Whatever type of equipment you have in your mill, and no matter what fiber or blend you're spinning, there's an Accotex Roll Cover to meet your requirements. Your Armstrong representative will be glad to work with you in selecting the roll cover best suited to your work.

For more information on the complete Armstrong line of supplies for textile mills, write to Armstrong Cork Co., Industrial Division, 6511 Dauphin Street, Lancaster, Pa.

For maximum eyebrow resistance on spinning frames, you can depend on Armstrong NC-762 Accotex Cots. Ask your Armstrong man to arrange a test installation in your mill. Prove on your own frames how these cots perform.

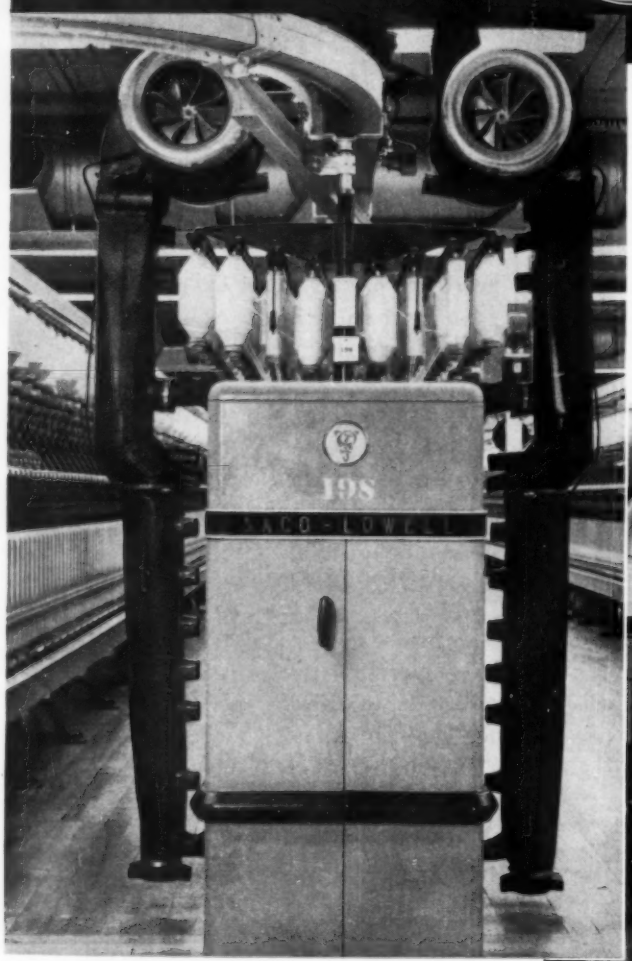


Armstrong ACCOTEX COTS

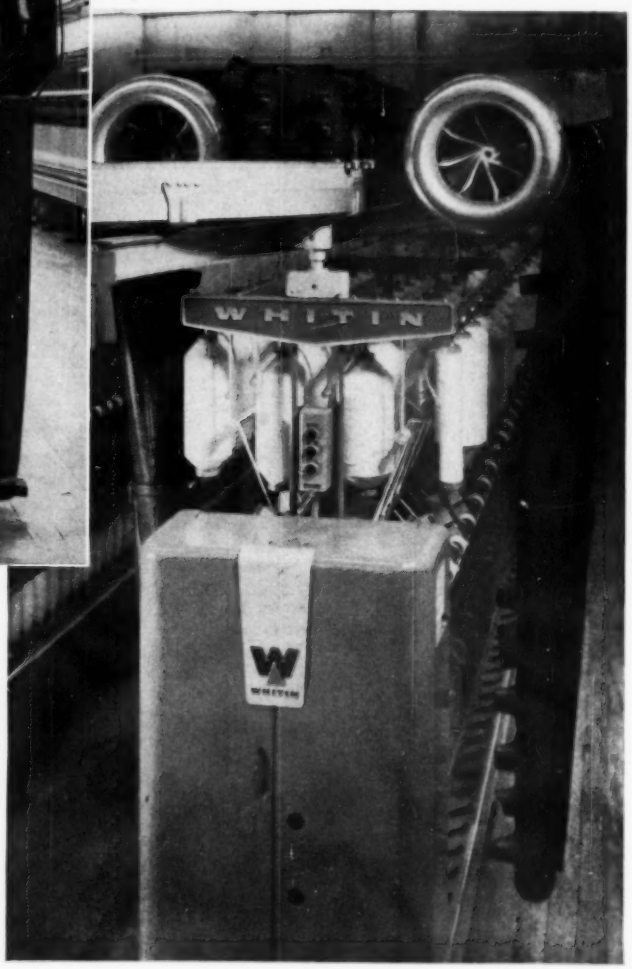
. . . used wherever performance counts

Bahnson

The most modern frames
with
The most modern cleaner



Bahnson Cross-Jet Cleaner
Installed on Gwaltney Frame



Bahnson Cross-Jet Cleaner
Installed on Piedmont Frame

TOTAL FRAME CLEANING

THE *Bahnson*

CROSS-JET CLEANER

CLEANS MORE FRAMES, MORE AREA, MORE OFTEN

You get maximum advantages for frame and room cleaning

- Four fans incorporated into one compact unit
- Dual nozzles provide 180 degree overhead cleaning
- Multiple outlets for creel, drafting system, and frame
- Flexible extended nozzles with automatic stop-and-go control
- High air handling capacity—adjustable for your needs
- Automatic fan shut-off for any desired track section

You get extra value with superior features

- Operates on creel or ceiling supported track
- Individual motors with overload protection and indicator lights
- Electrically operated for trouble-free performance
- Balanced low-silhouette requiring minimum overhead clearance
- Low center of gravity for maximum travel stability
- Heavy duty track for maximum life

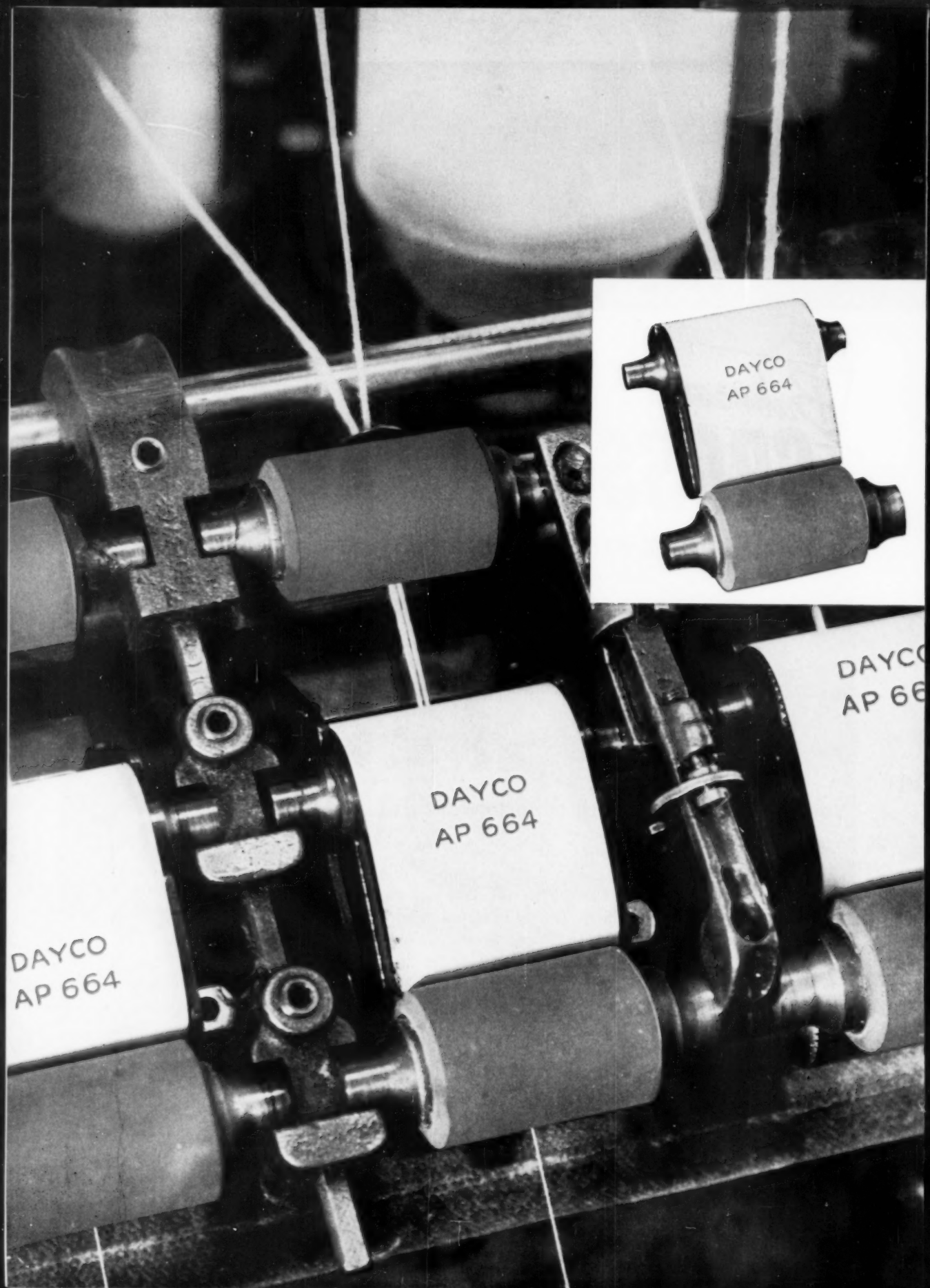
Let a Bahnson representative analyze your cleaning problems and explain the benefits of the Bahnson Cross-Jet Cleaner for your requirements. There's no obligation. *Write Bahnson today!*

Bahnson AIR-O-MATION

Air at Work for Increased Profits

THE BAHNSON COMPANY

WINSTON-SALEM, N. C., U.S.A.


DAYCO
AP 664
DAYCO
AP 664
DAYCO
AP 664
DAYCO
AP 66

Cut out lost time !

by using Dayco Cots and Aprons

PROFITS ARE MADE . . . or lost . . . right there in your drafting area. Put up with slow Monday morning starts, excessive ends down and overloaded clearer boards, and there go the profits. On the other hand, if you equip your drafting area with Dayco Aprons and Cots, you'll count out more production . . . with fewer man-hours . . . because you've eliminated the principal causes of slow-ups and down time.

FASTER START-UPS are yours with Dayco Aprons and Cots because they won't adhere to fibers . . . no matter how long you've been shut down. By the same token, they're unaffected by lubricants and oils in the natural fiber and, above all, stay dry even when the temperature and humidity get out of hand!

COUNT THE YARDS at the end of the shift and you'll be surprised at how many more you've run. Because Dayco Aprons and Cots have just the right coefficient of friction, they have a smoother, more economical drawing action that leaves all the long fibers in the yarn instead of depositing them on the clearer board. The result is stronger yarn, fewer ends down, and more yards per shift.

LONGER LIFE means that over the months, you'll find the Dayco Combination gives hundreds of hours more service. Dayco Aprons won't curl, become sticky or groove . . . won't stretch or take a permanent set. Neither will Dayco Cots pit, groove, or become glazed from hard wear. Naturally, with the longer life of the Dayco Combination, you'll save many hours of replacement time.

Take a second look at your profits and you'll want your Dayco representative to arrange a test with the Dayco Combination the next time he calls. Or write The Dayton Rubber Co., Textile Division, 401 S. C. National Bank Building, Greenville, South Carolina.

Dayton Rubber

Dayco and Thorobred Textile Products for Better Spinning and Weaving

OVERSEAS PLANT, THE DAYTON RUBBER CO. LTD., DUNDEE, SCOTLAND

For more data, circle A-10 on Reader Service Card

AUTOMATIC CLEANING where overhead track brings full air sweep of loom cleaner to every loom on the floor, without disrupting loom operation, keeping looms free of accumulated waste.

KEEPS LOOMS CLEAN . . . WITH NO DOWNTIME

In mills where Amco Heliclone Loom Cleaners have been installed, new high-quality production standards are being established.

The swiftly whirling outlet nozzles, driven by powerful air streams, direct high velocity jets of air in overlapping, circular paths resulting in a rapid series of sharp puffs over loom and warp surfaces. At the same time, supplementary air outlets clean overhead track and ceiling.

Automatic cleaning with Heliclones largely eliminates end runs and floats, waste bunches, end breakage, overshots, broken picks, and oil spots caused by loose accumulated waste. Of course, it completely eliminates the old-fashioned method of manual cleaning, which is a constant source of accidents and cloth imperfections, and is so costly in terms of labor and downtime.

Amco Heliclone Loom Cleaners may be used for the automatic cleaning of practically *all* makes and types of looms. A unit similar to the Heliclone is also available for winder cleaning. Write American Moistening Company for further facts.

- Keeps looms and ceiling free of accumulated waste
- Cuts loom cleaning and costly downtime
- Improves production and quality of fabric
- Reduces fire hazard
- Improves weave room appearance
- Can be used with beam handling equipment

AMCO HELICLONE® LOOM CLEANER

Pat. Pend.

AMERICAN MOISTENING COMPANY

Since 1888

Makers of Air Conditioning Systems and Textile Mill Equipment

Home Office and Plant: Cleveland, N. C. — Branches in Atlanta, Providence, Toronto

For more data, circle A-11 on Reader Service Card

Super-refining packs extra Color Value into this outstanding vat!

CARBANTHRENE®

BLUE BCF

SINGLE PASTE

New conditioning techniques developed by National Aniline research made this vat dye outstanding for pigment impregnation!

Its exceptional dispersibility . . . with a minimum of filterable insolubles and more efficient use of the dye . . . yields substantially better color value and cleaner dyeings.

Piece goods dye level and free of speckiness. There is little or no tendency to build up on the sides of packages and beams . . . penetration is thorough and even. Waste, rejects and redyes are at a new low.

If you haven't as yet tried the "new", improved CARBANTHRENES, this is a good one to try first. Write National Aniline for a sample today.

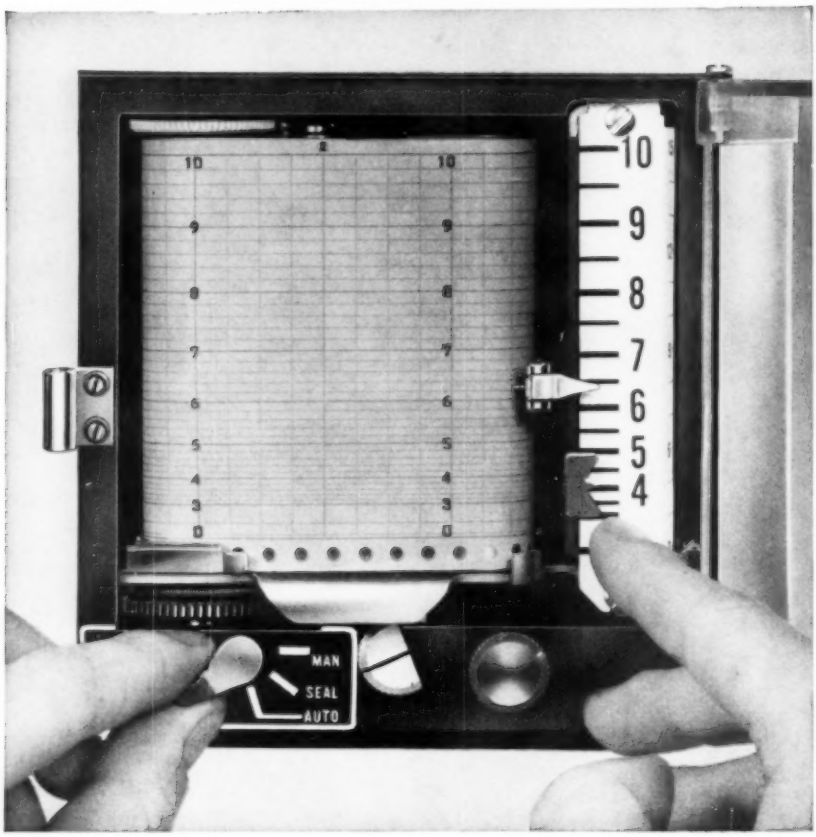
NATIONAL ANILINE DIVISION

40 RECTOR STREET, NEW YORK 6, N. Y.

Akron Atlanta Boston Charlotte Chattanooga Chicago Greensboro Los Angeles
New Orleans Philadelphia Portland, Ore. Providence San Francisco Toronto

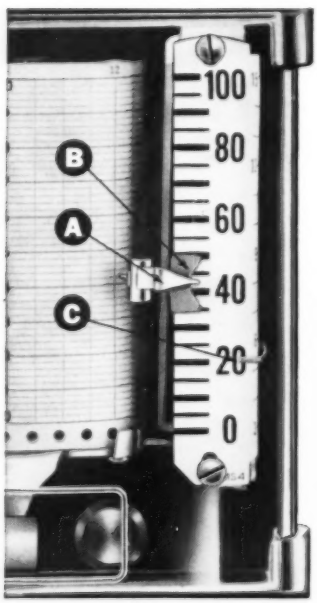
Allied Chemical

One of 38 Metagraphic Receiver Models you can choose from, all with only 5" x 5⅛" panel. This model has single-knob, six-position transfer station for completely "bumpless transfer" in cascaded control systems.



BRISTOL METAGRAPHIC RECEIVERS:

"Easiest 'bumpless transfer' you ever saw"



Variable (A), set point (B), and valve position (C), all on same scale, make manual-automatic transfer easy.

That's what instrument men say after trying the Bristol Metagraphic Pneumatic Receiver—even in cascade control systems.

Just seal, match pointers, transfer. There's not a single value to read. That's because the Metagraphic gives you valve position, set point and measured variable —*all on the same scale.*

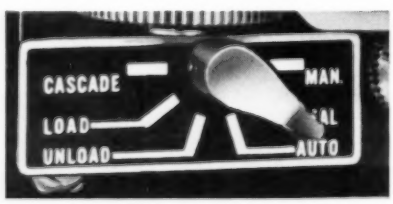
No finger-disconnects here! The Metagraphic is a true plug-in receiver—plugs and unplugs in 5 seconds with no loss of automatic control.

You can switch from indicator to recorder in less than 10 seconds, interchange many receiver models, change range simply by changing chart. Cuts down on costly reinstallations if process requirements are changed.

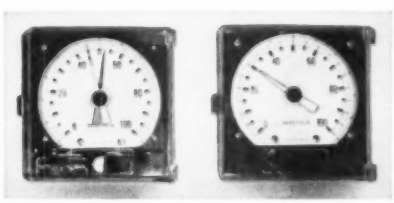
Write today for the complete Metagraphic story. Don't forget, Bristol offers the widest selection of miniatures on the market. (Full sized instruments, too.) The Bristol Company, 103 Bristol Road, Waterbury 20, Conn. B-18

BRISTOL TRAIL-BLAZERS IN PROCESS AUTOMATION

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS



Six-position transfer station (enlarged view) for cascade service. Three-position manual-automatic station is also available.



Metagraphic Indicating Receivers have full 9-inch scale for easy reading; feature complete 10-second interchangeability with recorders.

New word in profits: Zefran®

zĕf-răn

(Zĕf-răn), n. 1.

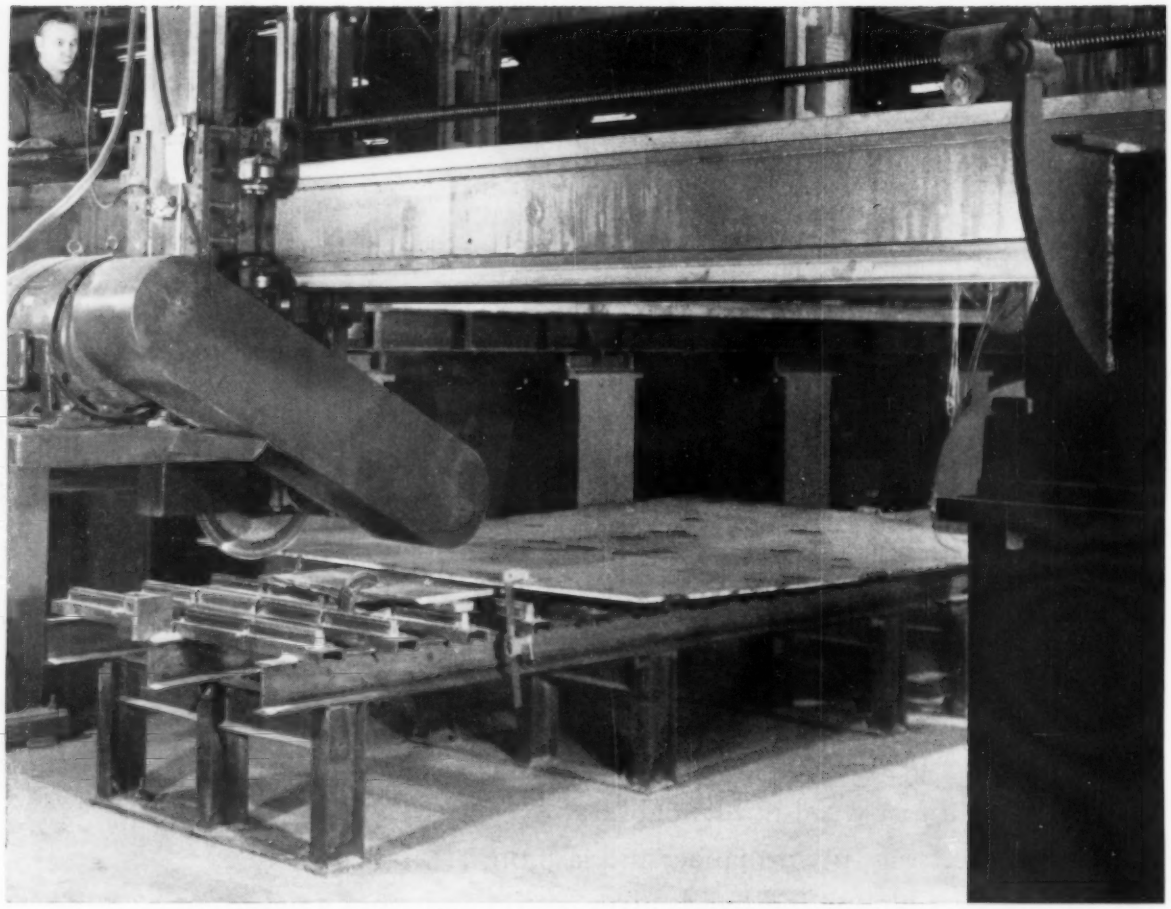
Entirely new acrylic alloy fiber made exclusively by The Dow Chemical Company. Zefran will make money for you because it is the last word in blendability, dyeability, finishing, processing, performance, and fashion. 1. In blends, Zefran improves bloom and hand, gives cotton and wool a year-round season. 2. Takes wide range of standard dyes (including vats)—allows greater flexibility in choice of dyestuffs than any other fiber. 3. Makes the finishing of fabrics easier and all but makes a loom finish a reality. 4. Processes like a natural fiber—can be efficiently handled on all standard equipment used for staple yarn manufacture. 5. Performs like a trooper—builds "maid service" right into fabric. 6. Gives fashion a shot in the arm . . . here is the luxury fiber man made for the woman who wants *everything*.

Fabrics now being created by selected mills (for apparel only). For further information write The Dow Chemical Company, Textile Fibers Department, Williamsburg, Va.

Zefran®

You can depend on DOW

For more data, circle A-14 on Reader Service Card



This special Ryerson saw assures square, parallel cuts and smooth edges on stainless plate . . . width and length tolerances ± 1/32"

The plus you get when it's stainless from Ryerson

WIDEST SELECTION—No other source comes close to offering a comparable range of stainless types, shapes and sizes—so you can always get exactly what you need.

UNIQUE SERVICE—Big-capacity abrasive saw assures the ultimate in cutting accuracy . . . and shearing, hack-sawing and flame-cutting facilities also meet exacting requirements.

EXPERT TECHNICAL HELP—Ryerson specialists are always ready to work with you on any problem of stainless selection and fabrication.

No wonder more people buy stainless from Ryerson than from anybody else.

Machine-cut stainless rings and discs from Ryerson are *finished* parts to your specifications, priced below your own costs.

RYERSON CERTIFIED QUALITY

RYERSON STEEL®

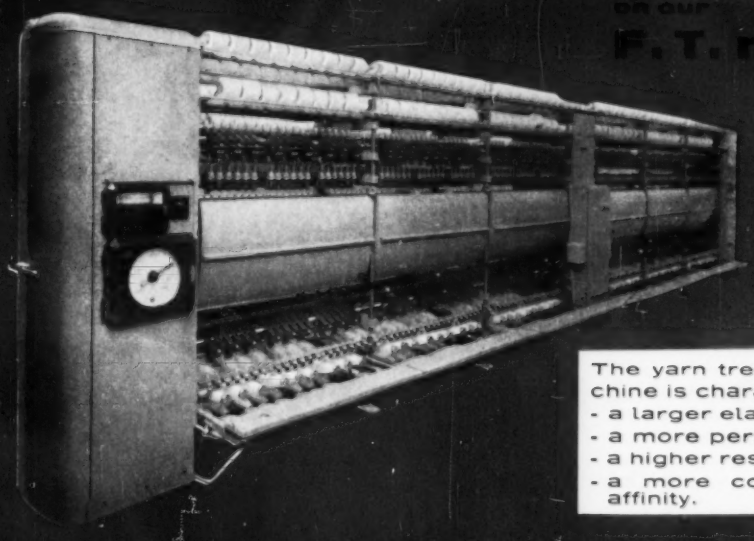
Member of the INLAND® Steel Family

Principal Products: Carbon, alloy and stainless steel —tubing, bars, structurals, plates, sheets —aluminum, industrial plastics, metalworking machinery, etc.

JOSEPH T. RYERSON & SON, INC. PLANTS AT: NEW YORK • BOSTON • WALLINGFORD, CONN • PHILADELPHIA • CHARLOTTE • CINCINNATI • CLEVELAND DETROIT • PITTSBURGH • BUFFALO • INDIANAPOLIS • CHICAGO • MILWAUKEE • ST. LOUIS • LOS ANGELES • SAN FRANCISCO • SPOKANE • SEATTLE

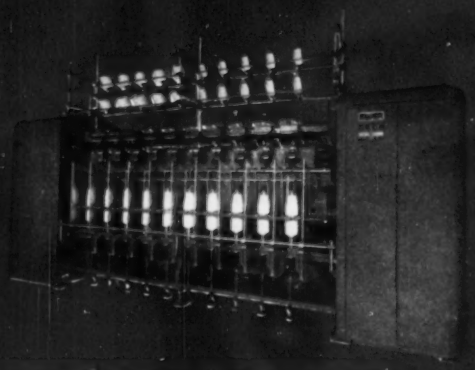
all the crimped thermoplastic yarns are produced under the best safety conditions on our

F.T. machine

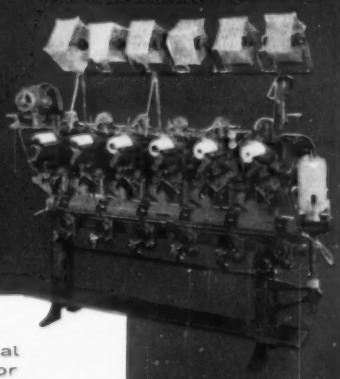


The yarn treated on this machine is characterized by:
- a larger elasticity
- a more permanent crimp
- a higher resistance
- a more constant tinctorial affinity.

finishing machines



AR. 4 Assembling Twisting Machine with large capacity



M Winder

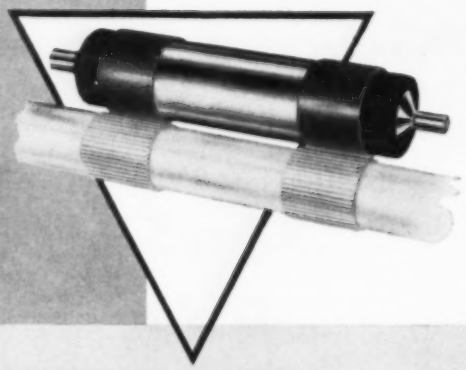
with its special attachment for building bobbins of controlled hardness

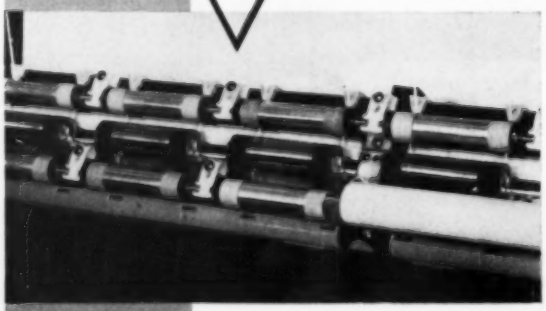
TEXTILE MACHINERY EXHIBITION

MANCHESTER - Belle Vue 15 th - 25 th October 1958 - Stand 1212

ATELIERS ROANNAIS
de Constructions Textiles
ROANNE - Loire - FRANCE

New MagneTrol by Saco-Lowell is here.....





More than 50% of the components previously necessary to apply top roll pressure are eliminated by this revolutionary new system which uses Magnetic Top Rolls in the drafting element. Proper roll pressure is maintained only by the force of magnetic attraction.

In addition, the NEW MagneTrol system never requires lubrication above the roller beam.

These 4 reasons make the MagneTrol frame the Cleanest, most efficient ever developed.

1. **No lubrication above the beam**
2. **Exceedingly few component parts**
3. **Efficient cleaning action of the clearers**
4. **Eliminates problem of worn necks on steel roll**

Get all the facts about the revolutionary MagneTrol from your nearest Saco Lowell Sales Office.

SACO-LOWELL-SHOPS

EXECUTIVE OFFICES: 60 BATTERYMARCH STREET, BOSTON 10, MASS.
Shops: BIDDEFORD, ME., SACO, ME., SANFORD, N. C., EASLEY, S. C.
Sales Offices: ATLANTA, GA., CHARLOTTE, N. C., DETROIT, MICH., GREENSBORO, N. C., GREENVILLE, S. C., TORONTO, CANADA

For more data, circle A-17 on Reader Service Card

A Bronze yoke bushing nut
B Handy grip iron wheel
C Bronze yoke bushing
D Iron yoke cap with zerk fitting for lubricating bushing
E Steel yoke cap bolts and nuts
F TYPE 316 STAINLESS STEEL spindle
G NI-RESIST CAST IRON, TYPE 2, yoke
H Bronze eye bolt nuts
I Malleable iron gland flange
J Steel gland eye bolts
K Steel gland lug bolts and nuts
L TYPE 316 STAINLESS STEEL gland
M Teflon impregnated asbestos packing
N TYPE 316 STAINLESS STEEL bonnet bushing
O NI-RESIST CAST IRON, TYPE 2, bonnet
P Steel bonnet bolts and nuts
Q TYPE 316 STAINLESS STEEL spindle ring
R Asbestos gasket
S TYPE 316 STAINLESS STEEL wedge pin
T NI-RESIST CAST IRON, TYPE 2, through-port body
U TYPE 316 STAINLESS STEEL solid I-beam wedge
V TYPE 316 STAINLESS STEEL seat rings

Wherever valves are attacked by acids, salt and alkaline solutions, sea water, brine or other corrosive fluids, vapors or gases, "Jenkins Ni-Resist Gate Valves" are *fighting* words.

In a wide range of corrosive and erosive services common to the chemical, food, plastics, marine, petroleum, and pulp and paper industries, these valves have shown a remarkable ability to withstand corrosion and cut valve costs.

The secret of their long, trouble-free service is the combination of Ni-Resist type 2 cast iron and type 316 stainless steel trim, plus Jenkins *extra value* construction throughout. No other gate valves offer this combination for fighting corrosion.

When choosing Ni-Resist valves, let the famous Jenkins Diamond be your guide. Specify "JENKINS NI-RESIST" — for longer valve life. Write us, or ask your Jenkins Distributor for information folder No. 205. Jenkins Bros., 100 Park Avenue, New York 17.

JENKINS
LOOK FOR THE JENKINS DIAMOND
VALVES
JENKINS
SINCE 1864

Sold Through Leading Distributors Everywhere

For more data, circle A-18 on Reader Service Card

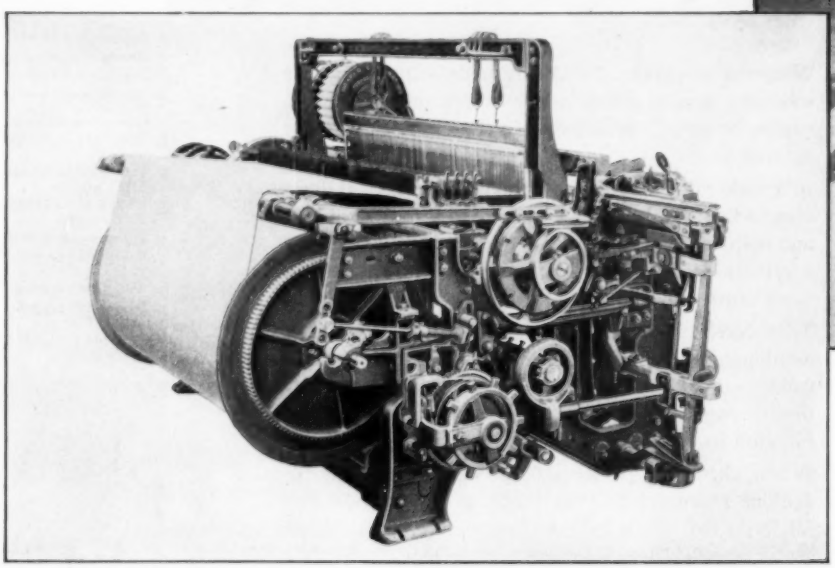
Improvements make them different...

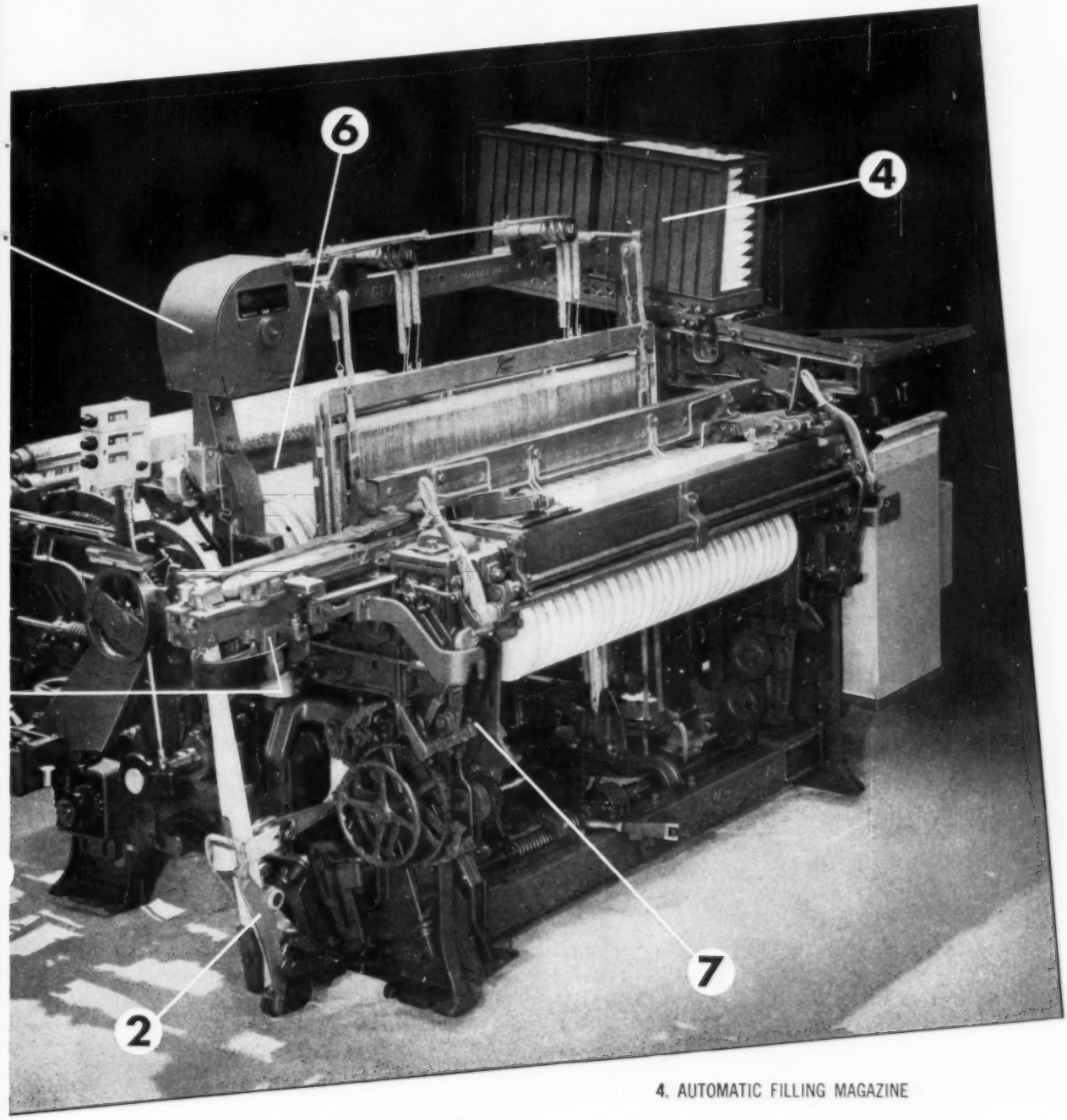
Today's high-speed automatic X-2 Model Loom, with its many technical advances, is a far cry from the X-2 of yesteryear.

Research and Engineering developments, while reducing costs, have brought about "new highs" in loom efficiency and production.

Many of these attachments currently available on new Draper X-2 Looms can be adapted to your looms.

See your Draper Representative for additional information.





1. TRU-TENSION LET-OFF
2. LINK TYPE PARALLEL
3. CLOCK SPRING TOP MOTION
4. AUTOMATIC FILLING MAGAZINE
5. #14 SHUTTLE CHECK
6. SERRATED WARP STOP ELECTRODE
7. HIGH ROLL TAKE-UP

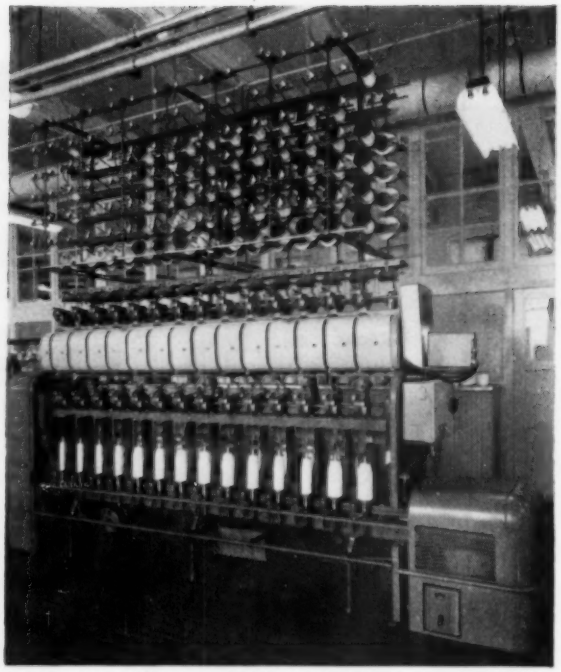
DRAPER CORPORATION

HOPEDALE, MASS.

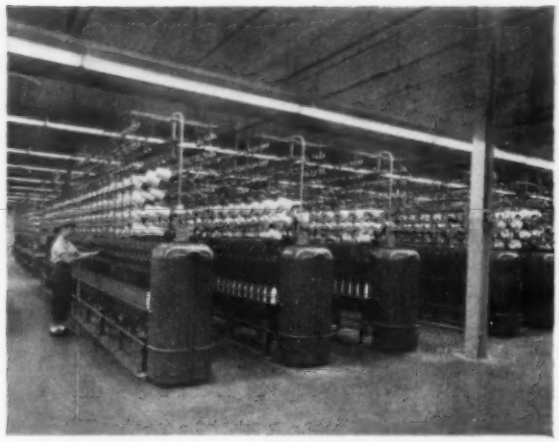
ATLANTA, GA. • GREENSBORO, N.C. • SPARTANBURG, S.C.

See Some of Many Results You Get

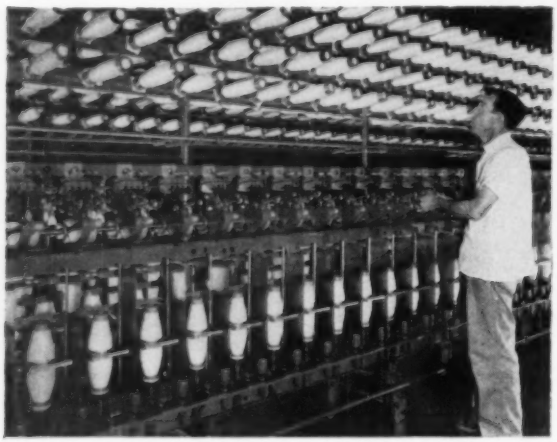
from the Model 10 Ring Twister



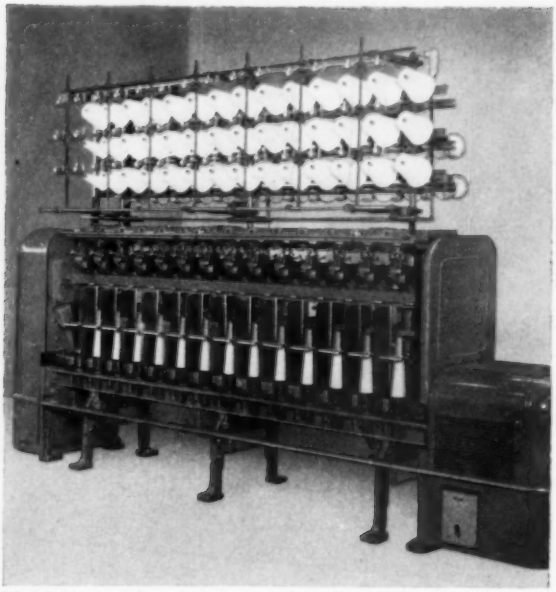
Only the Model 10 can use the No. 511 Saaba* attachment, to process uniform, top quality Saaba, the last word in textured yarn.



Worsted, spun synthetic and metallic yarns can be plied from cones, and taken up on large packages.



Glass yarn can be twisted from pirns to double-taper packages, and be used for filling and warping without rewinding.



Model 10 can take up yarn on cones, also produce straight wind, taper-top, and double tapered packages (filling or warp wind).

Member American Textile Machinery Association

23.7.7

For more information on how the versatile, low-maintenance, Leesona Model 10 Ring Twister can improve your twisting production, write for Bulletin 10-A.

UNIVERSAL WINDING COMPANY, P. O. Box 1605, Providence 1, R. I.

Sales Offices: Boston, Philadelphia, Charlotte, Atlanta, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland.

SAABA is a trademark of Universal Winding Company

OIL IS SUPPLIED TO BOTH TOP AND CONICAL BEARING SURFACES THROUGH SEAMS.
LESS OIL IS NEEDED.
TRAVELER DISTRIBUTES OIL.
OIL FLOWS TO ANNULAR RESERVOIR WITHIN THE RING, THEN IS DRAWN BY CAPILLARY ACTION THROUGH SEAMS.

New..."M" type HERR Conical Ring

better lubrication with less oil

SEAM LUBRICATION. A new idea . . . utilizes the principle of capillary attraction to provide more uniform lubrication than has been possible in the past. It is the outstanding feature of the new "M" type ring.

SEVERAL YEARS EXPERIENCE IN SOME OF THE LARGEST TEXTILE PLANTS HAVE ESTABLISHED THE BENEFITS OF THIS RING.

1. **LESS OIL IS USED IN THIS NEW "M" TYPE RING** because no oil is wasted. It all goes to the bearing surfaces of the ring through the seams.
2. **TRAVELERS LAST LONGER.** As a matter of experience in mills which have been using "M" rings for the past three years, the uniformity of lubrication increases traveler life.
3. **RINGS LAST YEARS LONGER.** High speed operation for years has established the superiority of the new design.
4. **CLEANER YARN.** With better oil distribution and no leakage, mills are getting cleaner yarns.
5. **FASTER OPERATION.** Speed-up is possible without extra wear to ring and traveler. The traveler receives oil from the lubricating seams over the complete bearing surfaces of the ring.
6. **REDUCES YARN BREAKAGE.** As in all Herr Conical Rings, tension is automatically adjusted by the action of the traveler and conical design of the ring.

Write today — get facts that will make new profits possible.

The 5½" diameter 43/64" face Herr Conical Ring requires only one oil cup.

HERR® MANUFACTURING CO., INC.

309 FRANKLIN STREET • BUFFALO 2, N. Y.

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON, FIBERGLASS AND BLENDED YARNS OF ALL TYPES

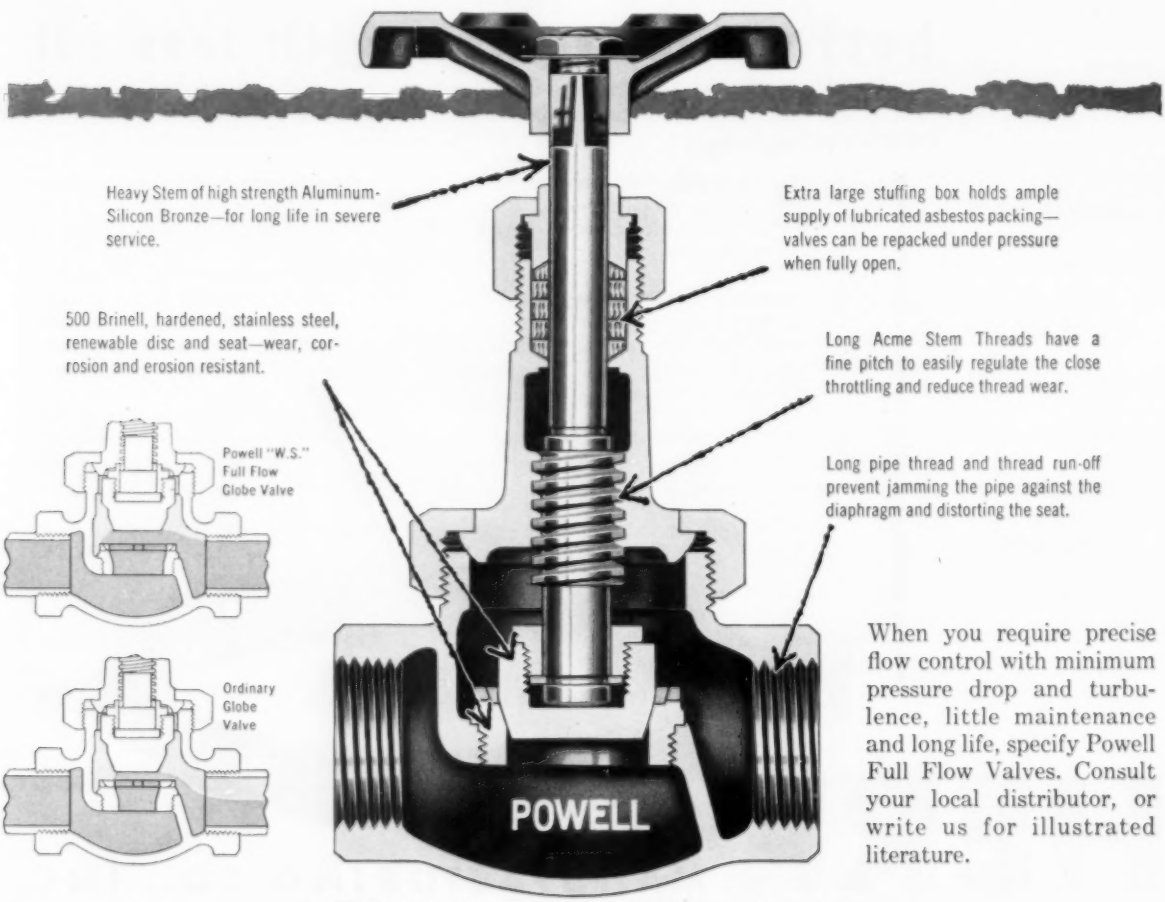
BULLETIN!

POWELL introduces new member in world's largest family of valves

Powell engineered "Full Flow" bronze valves are now available in a full line: the brand-new 150-pound screwed end Globe Valve, in addition to the well-known 200-300 pound Screwed and the 150-300 pound Flanged Globe and Angle Valves.

Although designed by Powell to assure maximum flow with minimum pressure drop and internal turbulence, these valves can be throttled to permit only the minutest amount of fluid to pass through. And, if desired, they can be supplied with Indicator Collar, Arm and V-port Disc for quickly determining flow and holding it constant.

Compare these advantages of Powell Full Flow valves:


Heavy Stem of high strength Aluminum-Silicon Bronze—for long life in severe service.
Extra large stuffing box holds ample supply of lubricated asbestos packing—valves can be repacked under pressure when fully open.
500 Brinell, hardened, stainless steel, renewable disc and seat—wear, corrosion and erosion resistant.
Long Acme Stem Threads have a fine pitch to easily regulate the close throttling and reduce thread wear.
Long pipe thread and thread run-off prevent jamming the pipe against the diaphragm and distorting the seat.
Powell "W.S." Full Flow Globe Valve
Ordinary Globe Valve
POWELL

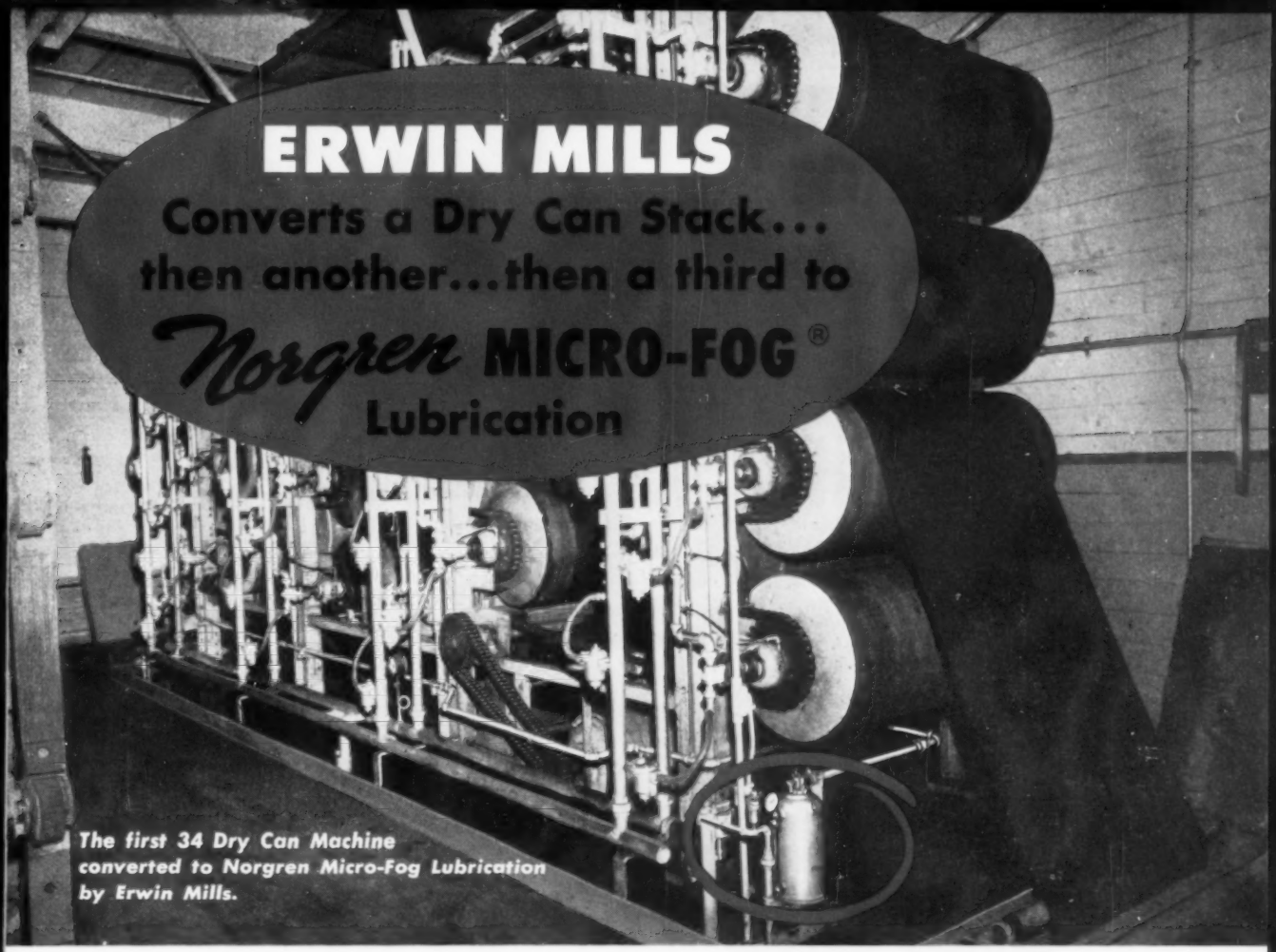
When you require precise flow control with minimum pressure drop and turbulence, little maintenance and long life, specify Powell Full Flow Valves. Consult your local distributor, or write us for illustrated literature.

Fig. 2600 (Sectional)—150-pound "W.S." Full Flow Globe Valve, Screwed Ends

THE WM. POWELL COMPANY • *Dependable Valves Since 1846* • **Cincinnati 22, Ohio**

For more data, circle A-22 on Reader Service Card

For more data, circle A-23 on Reader Service Card →



The first 34 Dry Can Machine converted to Norgren Micro-Fog Lubrication by Erwin Mills.

Norgren MICRO-FOG® Application Highly Profitable to ERWIN MILLS

- Bearing Failures Eliminated
- No significant bearing wear in 12 months operation
- Bearing temperatures reduced approximately 10° F
- Uneven drag on bearings due to over or under lubrication eliminated
- Hand lubrication of bearings ended
- No more lubricant dripping from bearings
- Considerable saving in lubricant costs
- Substantial savings in maintenance costs

At Erwin Mills, Inc., in Cooleemee, North Carolina, lubricant seepage from the bearings became a problem on the cylinder drying machines. Cleanup was costly, each bearing had to be greased by hand, lubrication was unsatisfactory and lubricant was wasted.

In the fall of 1957, MICRO-FOG was installed on a stack of 34 dry cans. During the months that followed, results were so outstanding that they decided in April, 1958, to make the same conversion on another stack of 36 dry cans. After repeated success, a third application of Norgren MICRO-FOG was made to another dry can stack in July. Total results have amounted to a big saving in maintenance time and money, a reduction in lubricant costs, and better lubrication for the bearings.

If it's Norgren...It's Dependable.

For complete information about this installation call your nearby Norgren representative listed in your telephone directory — or WRITE FACTORY FOR BLUEPRINT MF-27.

C. A. NORGREN CO.

3404 SOUTH ELATI STREET • ENGLEWOOD, COLORADO

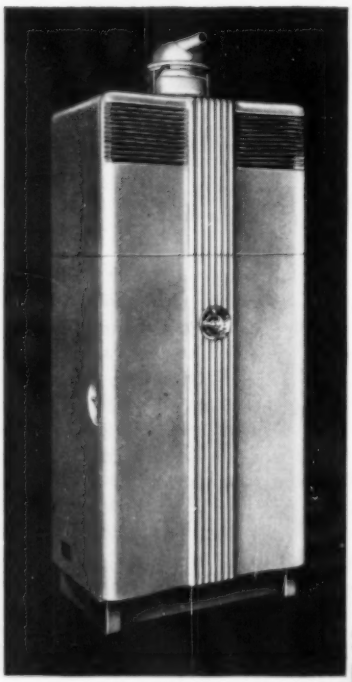
BETTER AIR CONDITIONING FOR EVERYBODY EVERYWHERE

Carrier

For precise temperature and humidity control!

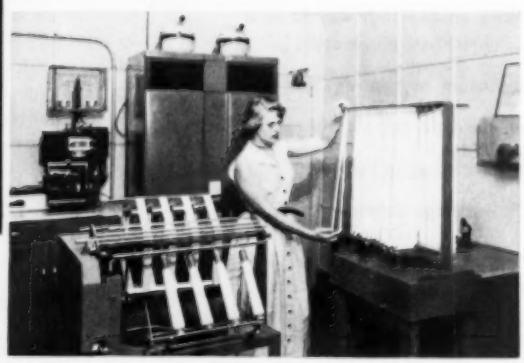
How precise? Carrier Laboratory Weathermakers are designed to maintain A.S.T.M. standard conditions of 23° C (73.4° F) and 50% relative humidity in small testing laboratories. Of course, within certain limitations they can also be used effectively for many other room conditions. Operated within capacity and design conditions, they can maintain a space temperature within plus or minus 1° F and humidity within plus or minus 1½% around the clock every day of the year.

The Carrier Laboratory Weathermaker is a product of years of specialized experience in all phases of atmospheric control, involving applications of air conditioning and refrigeration to industrial plants and processes. Want complete facts about performance and application? Call the Carrier office nearest you. Or write Carrier Corporation, Syracuse 1, New York.

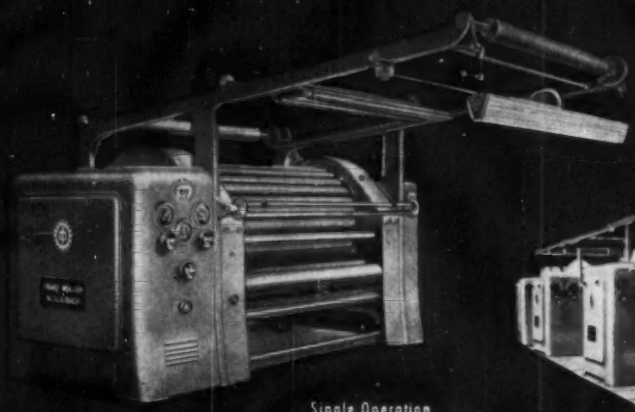


Carrier Laboratory Weathermakers. Completely self-contained and fully factory engineered. Delivered to your mill ready for installation with simple water and service connections. Remote thermostat and hygrostat connect to unit with low-voltage wiring. Available in capacities from 20,300 to 54,000 Btu per hour.

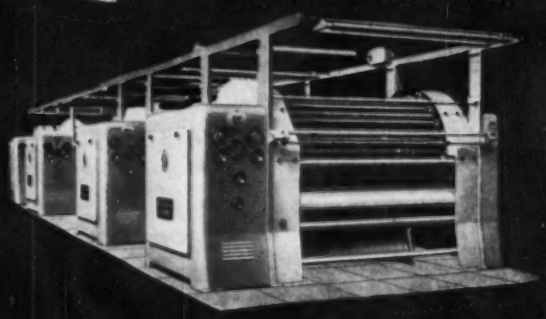
Typical Laboratory Weathermaker installation in a textile mill. Easy to service and keep clean, these units are also exceptionally quiet. As temperature is maintained by an electric reheater, a laboratory is independent of all other heat sources. Constant temperatures are assured through nighttime or holiday heating-system shutdowns.



WHY ? MAYBE ARE SUFFICIENT



Single Operation



Tandem Operation

THE RESULT OF 100 YEARS EXPERIENCE

30 of these high speed nappers replaced
80 standard nappers in a North Carolina Mill

for reasons of:

- New Processing Methods
- Unequalled Finish
- Highest Production
- Labor Savings

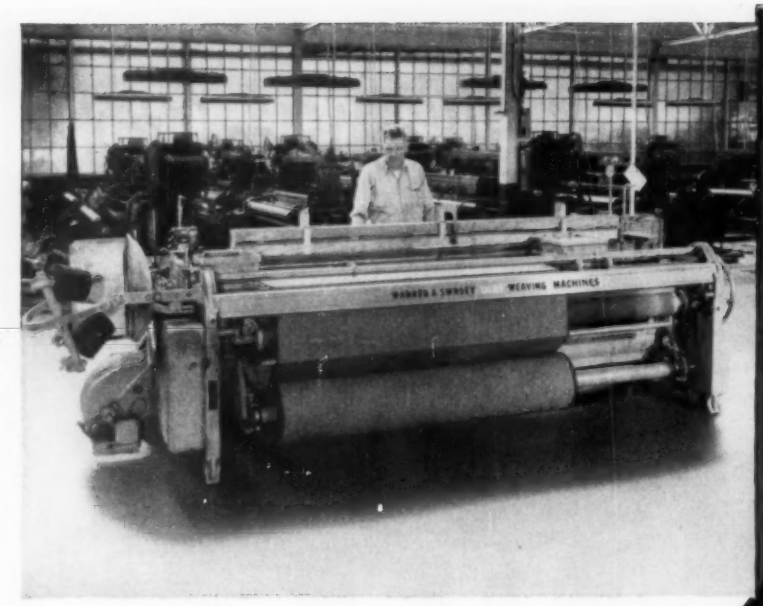
our newly established service centre in Greenville, S. C. offers the following facilities:

- New sales and show room
- Free demonstrations
- Large stock of spare parts
- Permanent German service man

For more information contact our Agents:

PARROTT & BALLENTINE
TEXTILE EQUIP. & CO.
3440 Augusta Rd. Greenville, S. C., USA
Phone: CEdar 2-8691
FRANZ MULLER CO.
CEdar 2-9930
CABLE: Parbal

FRANZ MÜLLER
MASCHINENFABRIK M. GLADBACH (WESTERN GERMANY)



This weaver tells us, "These Warner & Swaseys run smooth with no vibration. They're quiet and seem to have been designed to make my work much easier. I'd rather run 10 Warner & Swaseys than go back to the four looms I formerly operated."

Yale Woolen Mills

eliminates filling waste problem,

saves 3½¢ per woven yard

—thanks to their 10 Warner & Swasey—

Sulzer Weaving Machines

● Yale Woolen Mills, 76-year veteran weaver of high grade woolen fabrics, upholstery material and blankets, use over 90 late-model multi-box looms. However, their nucleus of production is from 10 Warner & Swasey-Sulzer Weaving Machines equipped with Filling Mix Units.

Their versatile Warner & Swaseys—operating at 240 picks per minute—outproduce Yale's other equipment 2 to 1. They also have decreased second quality fabric by 20%. Burling and mending costs have dropped from 33 to 50%, depending upon the type fabric.

Why not call in our nearest Field Engineer and have him show how you can cut costs, speed production and improve product quality in your weaving operation.

WARNER & SWASEY
Cleveland
PRECISION MACHINERY SINCE 1880
TEXTILE MACHINERY DIVISION

SALES OFFICES: Main Office and Factory: 5701 Carnegie Ave., Cleveland 3, Ohio
61 Rivulet Street, North Uxbridge, Mass. • 121 11th Street, N. E., Atlanta 3, Ga. • Suburban Square Building, Ardmore (Philadelphia), Pa. • 624 Pecan Avenue, Charlotte 5, N. C.

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS...WITH A WARNER & SWASEY

Profits vs. Liquidation

In this issue of TEXTILE WORLD are two extremely important reports. One is a report on the highlights of the exhibits at the Greenville Show last month. The other is a report on the state of business in bleaching, dyeing, printing, and finishing. Together, these reports sum up the challenge now facing mills throughout the textile industry.

As everyone knows, a great deal of the progress made in textiles in the last quarter of a century has come about through chemicals and improvements in chemical treatment of fibers, yarns, and fabrics. Yet some sections of the report on bleaching, dyeing, printing, and finishing business make pretty dismal reading.

This branch of the textile industry has been going through a turmoil of change: plant migration, shifting markets, impossible labor conditions, fly-by-night management, revolutionary changes in technology, and all the other ills that beset other branches of the industry. Unfortunately, the catharsis is not yet complete. Big segments of this business are still saddled with out-of-date plants, crushing labor and competitive conditions, and hand-to-mouth management. It is certain that the turmoil of change must continue for some years yet, until the internal ills are cleared up.

Contrast: Progress

In sharp contrast to parts of the picture that emerge from the finishing-business report is the bright, new progress evident in the report on the Greenville Show. Major advances have been made by manufacturers and suppliers, and the Greenville Show had on display products that can turn marginal operations into profit producers.

The keen interest shown by alert textile men in the Greenville Show exhibits is evidence that many plants are taking advantage, and intend to continue taking advantage, of the many aids to profit as they are developed.

There is a widespread opinion that late 1958 and early 1959 will bring a mounting surge of plant improvements, perhaps greater than any since the very early 1950's. With the margin of improvement now possible in all the major textile manufacturing and finishing processes, the next few years may see the industry take on a new face.

The Penalty of Lagging

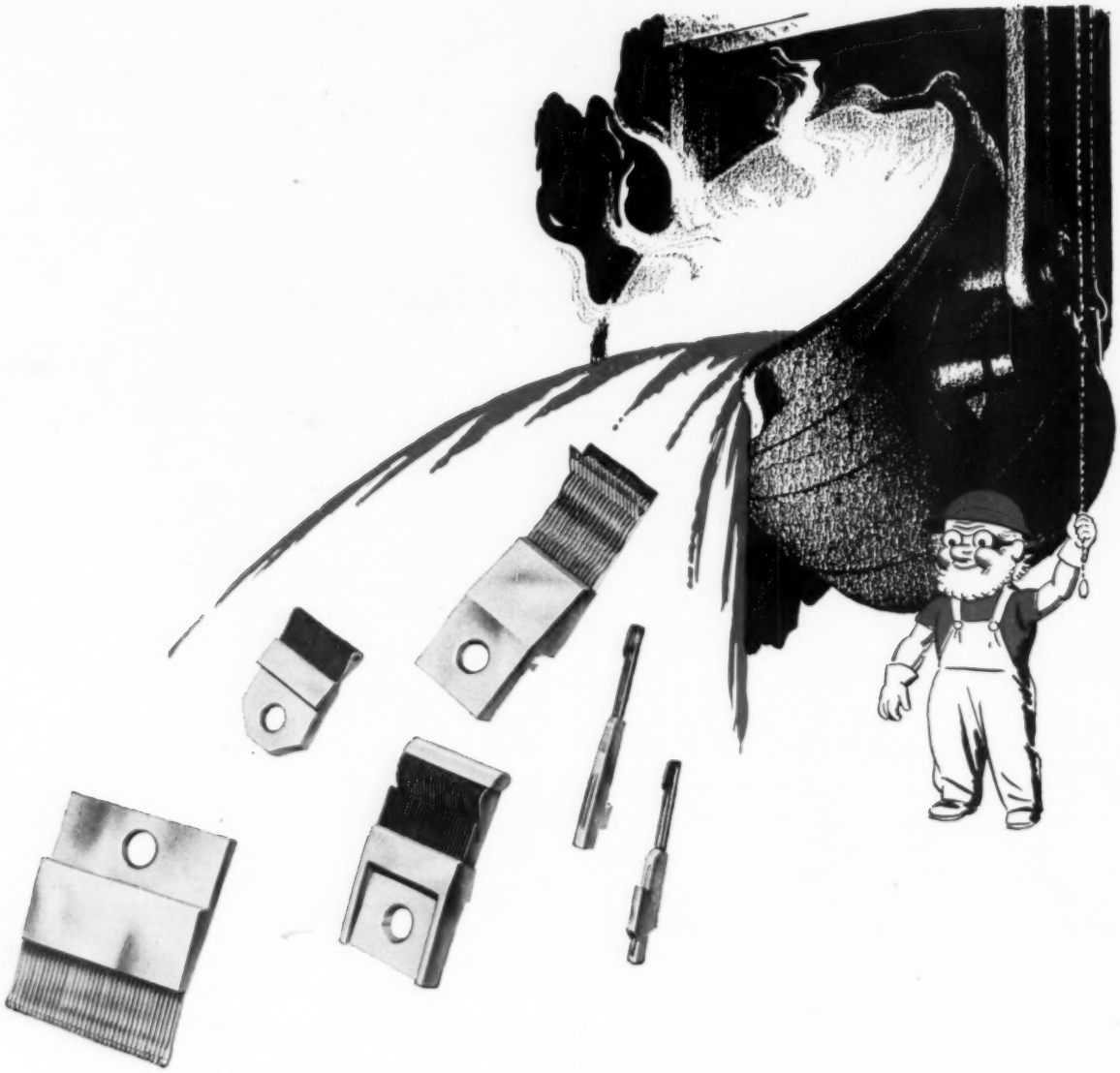
But, as always, there will be many mills, perhaps whole segments of the industry, that will not take advantage of the improvements possible. Many of these mills will be liquidated when the next period of bad business comes. It is certain that many plants operating under some of the physical, labor, and competitive conditions described in the finishing-business report will head the next parade of liquidations.

In the tough business years and months we have just been through, some textile companies have managed to make satisfactory profits in the face of low over-all industry profits and losses by many companies. These profitable companies never stopped their continual improvement programs. They are now in a highly advantageous competitive position. They will chalk up still bigger profits as some of their competitors are faced with the necessity for catching up with their efficiency.

That is part of the price of lagging, of raising efficiency by spurts, of not taking every advantage to lower costs as it comes along.

Everyone recognizes that it pays to prepare for the next period of bad business during a period of good business, such as we are now entering. But operating statements next year will show that it also pays handsomely in the periods of good business to have prepared during the period of bad business.

O. M. Thomas



Ready for installation . . .

Textile Leaded Parts, made by the only needle manufacturer who builds knitting machines, follow traditional Textile policies of carefully controlled workmanship. Delivered ready for installation in the machine — sized, straightened, and cast in precision units. No further attention required. Let Textile casting services help you to reduce replacement and repair expense, minimize down-time and increase your production of first quality tricot and raschel fabrics. Quotations on request.

Wire Products Division
TEXTILE MACHINE WORKS • READING • PENNA.
In the South: Asheboro, N.C. In the North: Manchester, N.H.
Builders of Textile Machinery Since 1900

Textile LEADED PARTS

The "Reading" CK-A Circular Knitting Machine • The "Reading" Tricot Machine • The "Reading 100" Full-Fashioned Knitting Machine
The "Reading" Full-Fashioned Outerwear Machine • The "Reading" Braiding Machine • Textile Spring-Beard Needles • Arrow Latch Needles

For more data, circle A-27 on Reader Service Card

Textile World

Volume 108, No. 11. November, 1958

GREENVILLE—1958

Highlights of the 20TH SOUTHERN TEXTILE EXPOSITION

• The "biggest and best" Greenville Show, held last month in Greenville, S. C., put on display an imposing array of new and improved machinery, equipment, and supplies.

• Many of the thousands of textile men attending the show not only looked; they bought. Exhibitors reported keen interest and actual sales almost from the Monday opening of the show. Within hours it was evident that improving business was prompting mills to seek out products to improve their operations.

• On these pages the editors of TEXTILE WORLD report on the highlights of the show.

Opening, Picking, Carding

In opening and picking, emphasis was on better blending, shorter opening lines, and heavier laps.

An SRRL opener-cleaner, shown in conjunction with a short opening line, has been improved since the last show by cutting out unnecessary air currents and metal-to-metal contacts.

Safety devices have been added, and the machine is protected mechanically against overloading and choking. There are no beaters, lickerins, or spiral-wound rolls to break up trash and cause neps.

Also shown was a weighing blender that has been refined in recent years. This automatic system carefully weighs and blends all types of fiber from ¼ to 9 ins. long. An integral part of the machine is a "spray meter" that applies fugitive tints or emulsions to the fibers being blended.

Another blending feeder was exhibited that has a drop-bottom scale pan that is calibrated to ½-oz. increments. The pan assures low tare weight and inertia for maximum sensitivity.

Picker Laps Will Get Bigger

Several pneumatic attachments for compressing picker laps were shown, since the trend definitely is toward 80-lb. or heavier laps. One company showed a pneumatic pin puller for man-made-fiber laps to be used in conjunction with its pneumatic-pressure mechanism.

A fully automatic lap scale that plots the weight of each lap on a control chart and corrects the picker for off-weight laps created quite a bit of interest among quality-control personnel.

Considerable interest also was shown in an air clutch for picker calender-drive drop gear. The mechanism keeps the clutch in mesh at all times and reduces wear on the parts.

Special steel calender rolls, hardened-steel cut gears, and special lap pins for 80- to 90-lb. laps were in evidence.

These improvements at the picker

make it possible to produce a heavier and firmer lap and decrease card waste. With the extended running time on cards, big savings are possible in labor cost.

Card Drives Are Compact

Individual cotton card drives are becoming more compact; and in most instances the motor, drive, and control box require no more space than old-fashioned pulley arrangements. Installation usually can be made in minutes.

One card drive features overlapping pulleys that eliminate the necessity for a belt guard. A pivoting double idler compensates automatically for changes in the direction of the drive, and vibration is held to a minimum.

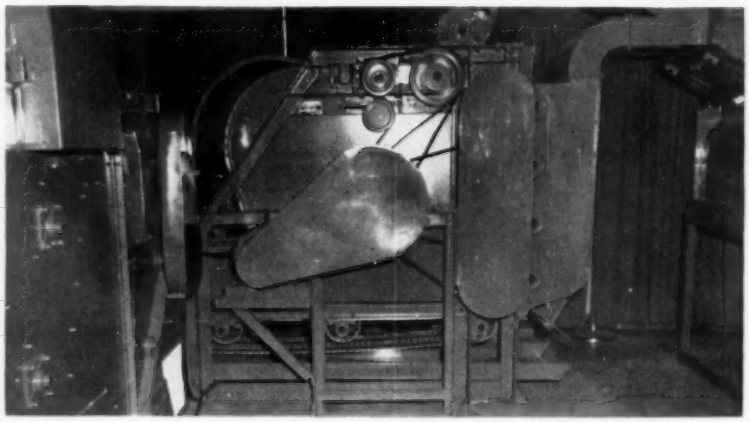
Several kinds of improved card clothing were displayed. One clothing has a plush base that is close to the knee of the wire so that little wire is exposed. This arrangement takes out a large percentage of the neps that normally pass through the card.

Another company showed clothing with a vulcanized-rubber and cloth base that holds wires securely under severe carding conditions. The wires are electro-galvanized to protect against rust.

Metallic clothing with more teeth per square inch and a flexible metallic clothing with exceptionally long life were shown by a third company.

Points Are Sharper

For mills with difficult blends and noily stock, a card grinding head was exhibited that puts a needle point on the wire. The point is smooth enough to release the stock easily, yet fine serrations keep the fibers from escaping before they are carded.



The manufacturer claims that use of this grinding head reduces nep count 40%, grinding frequency 80%, and stripping frequency 65% and increases yarn strength 10%.

Big coilers and cans, first shown two years ago, are becoming standard in most mills. A number of large coiler heads and cans were on display, but no new principles were offered except a built-in dolly on one large can.

Other attachments include an improved fancy with extra-long, spring-steel wire fillets especially designed to fluff man-made fibers and a stop motion for web breakage.

A sample long-staple blender with 14 working points was shown for laboratory use.

In the worsted field, a pin drafter was shown that has 33% greater pinning area and input capacity than previous models. The system has both single and dual can delivery plus a balling unit that delivers an 18x24-in. ball that weighs up to 50 lbs. Speed is 1,500 faller drops per minute.

Auxiliary equipment of interest to the carder included a remote-control bottom discharge receiver for card strippers. The operator in the mill pushes a button and the receiver in the waste house opens, dumps strips, and closes.

Drawing, Combing, Roving

Fewer drawing frames were shown this year, but the frames and conversion units exhibited were running at higher speeds. Speeds of 400 ft. per min. are not uncommon for the new machines, and the chances are that they will be running 500 ft. per min. at the next Greenville show.

This trend toward higher speeds and larger cans for drawing can save mills more than 30% in direct labor cost and 50% in reworkable waste; so new or modernized frames are rapidly becoming a must for most mills.

One frame was shown running well over 400 ft. per min. Features include a 1-hp. motor, electromagnetic clutch, signal lights, instant stopping, improved gearing, and automatic vacuum cleaning.

The Japanese drawing frame, first shown two years ago, now has an improved can-changing mechanism that permits the use of larger cans.

No new combers or roving frames were shown this year, but parts and supplies were displayed. The trend toward larger roving packages continues, with one company showing a 14x6¼ flyer. Other large flyers feature reinforced shoulders to prevent spreading.

New Stop Motions Are Shown

Two roving stop motions were shown.

One features an improved electronic control in the panel that eliminates arcing of individual switches. This attachment knocks off the frame when a predetermined number of layers is put on the bobbin.

The other motion has an electrically charged bar under the creel that grounds out when an end falls on it and stops the frame. This system is used in conjunction with a pneumatic stop motion on the front of the frame.

Beta rays are used to control the feed rolls in drawing frames so that an evener sliver will result. This application of radioisotopes to drawing frames was developed by Special Instruments Laboratory, Inc., and is claimed to reduce long-term variations in yarn weight by 50%.

Spinning

Spinning machinery held the spotlight at Greenville—both in quantity and quality. Seven new or greatly improved frames were shown.

Emphasis in every instance was on larger packages and higher speeds. Most of the cotton-system frames shown make packages weighing up to 1 lb. Drafts range to 75; spindle speed is 12,000 rpm. and up; traveler speeds go up to 8,500 ft. per min.

These frames have a number of other features in common although the mechanics differ from machine to machine. For example, most of them have balloon-control rings, straight-line drafting, simplified gearing, narrow dimensions (24 to 27 ins. wide), and built-in suction cleaning.

Thumbnail Description of Frames

Special features of the new Whitin Piedmont frame include individual spindle drives from a side shaft, built-in waste removal and motor-cooling system, lifter chains for the ring rail, and an improved builder motion. The frame is 27 ins. wide and has a 12-in. traverse.

The individual spindle drive was one of the few really new ideas at the show. The drive is by an endless ¼x20-in. belt from an individual driving pulley to the spindle whorl [Textile World, Sept., p. 105]. Long life and easy replacement of the belt and more-uniform twist are reported for the drive.

F. A. Young Machine Co. showed a 24-in.-wide frame, called the Vertical Y, that drafts from 10 to 70 and double creels 12x7 bobbins. Drafting is straight-line from creel to traveler.

The frame can be converted to spin drawing sliver with drafts to 200. Other features include balloon-control rings, simplified gearing, suction cleaning, and an open creel.

An improved Gwaltney spinning frame with magnetic top rolls was shown by Saco-Lowell Shops.

Individual ring holders replace the ring rail, and the separators can be tilted. Balloon-control rings are redesigned for better yarn control, and the frame is 4 ins. lower. It is equipped with the 01C Speed-Tex ring, for extra-high traveler speeds, and the Duo-Roth drafting system.

Arrow spinning-frame improvements, featured by Roberts Co., include the PosiWate top-roll suspension system that has no hooks and short springs, a single balloon-control ring that cuts down yarn fuzz, and short separators. Fluted bottom rolls are mounted in ball bearings; and there are ball bearings in every working, turning, and oscillating motion.

Worsted Frame Is Shown

A worsted spinning frame that can process fibers from 3 to 8 ins. long also was shown by Roberts. The frame, called Arrow WM-2, has a four-roll drafting system that can handle a variety of fibers and fiber lengths without changes in roll settings.

All four top rolls are mounted in ball bearings and are equipped with PosiWate suspension weighting that eliminates cap bars and is adjustable from 90 to 120 lbs. Fluted bottom rolls are mounted in ball bearings.

The frame has a simple arrangement for reversing the twist, and all constants can be changed at one master set of gears in the head.

The Model F woolen spinning frame shown by Davis & Furber has 10 to 25% greater production than previous models. Refinements include balloon-control rings, dial-control drum speed, and variable-speed drive.

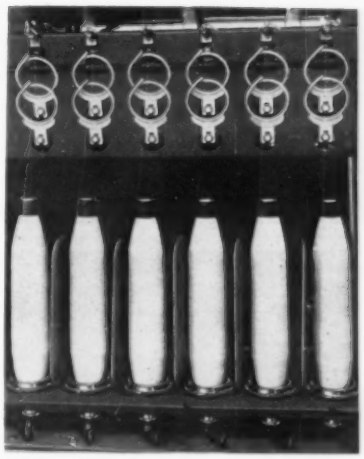
The OM-S sliver-spinning frame, the only direct spinner shown this year, has been equipped with larger supply cans that hold 3 to 5 lbs., overhead cleaners, nylon sliver guides, electromagnetic stop motion, and antifriction top rolls.

Fewer Change-Overs Offered

Two years ago, eight new or improved drafting change-overs and two new spinning frames were shown. This year the situation was almost reversed, which apparently indicates that mills are beginning to think about modernization in terms of completely new equipment. Change-overs shown feature antifriction bearings, spring weighting, and fewer working parts. Some assemblies eliminate nebs and cap bars.

Probably the most important single attachment shown was Saco-Lowell's magnetized top roll that replaces spring and dead weighting and greatly simplifies the drafting assembly by eliminating parts.

Several companies showed new or improved spinning rings designed for higher speeds. Changes largely consist of the shape of the ring and methods of oiling. Travelers also are being improved in design and finish to run 8,000 ft. per min. and up.



Spindle Runs 14,100 Rpm.

In keeping with the trend toward higher speeds, Hartford Machine Screw Co. displayed its new high-speed spindle running 14,100 rpm.

Improved supplies shown include harder thread guides, synthetic clearers, wooden tubes that outlast paper tubes, and bobbin holders.

Companies manufacturing cleaning and air-conditioning equipment offered a number of improvements. One company showed a waste-collection system that features a small conduit for transporting lint to the picker room or collecting point. This system eliminates the need for extra motors and collection boxes.

Other companies featured traveling cleaners with collector boxes for lint. One machine empties itself automatically each time it passes a collection point. Still another manufacturer showed an automatic doffing and material-conveying system along with a roving-frame cleaner and ceiling cleaner.

Ends Down Are Counted

One of the most interesting developments in spinning is an electronic signaling device that is actuated by traveler action and flashes a report to the operator when an end breaks.

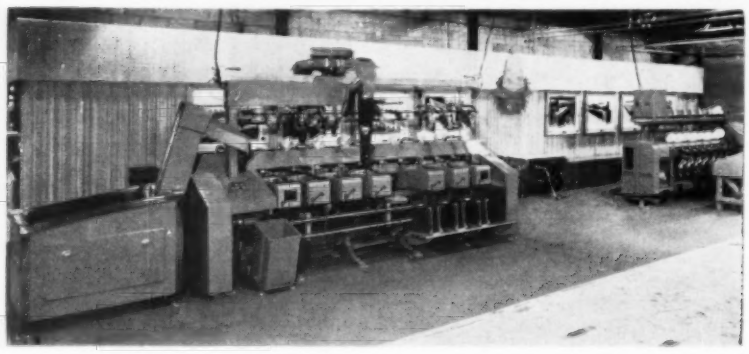
Trouble spots are located at a glance through the use of signal lights that can be used to reduce or eliminate patrolling. A master counting system records breaks for each frame side, for each operator's set, and for the entire department.

An important piece of auxiliary equipment for spinning, as well as for roving and twisting, is the adaptation of the Flexidyne drive for these frames. Already in use on cards, the variable-pitch drive is powered by small steel shot and offers the advantages of the fluid drive in giving a "soft start" for machines.

A builder motion that puts 20% more yarn on the bobbin and gives better control over the bobbin shape was shown. The unit is self-contained and can be obtained with dial adjustments.

Nylon is being used more extensively in drafting systems, particularly in cradles and roll-stand covers. In applications where the use of nylon is suitable, it gives low friction without lubrication.

Spooling, Winding, Twisting



New or improved winders and twisters emphasize higher speeds and larger packages.

One company has increased its winding speed from 9,000 to 11,000 rpm., for example, since the last Greenville show. A 10-in.-gauge twister made by another firm produces a 9-lb. package.

Here are brief descriptions of some of the machines:

An automatic spooler that builds a 6.5-lb. package on a 4° cone was shown by Barber-Colman Co. The large package can be used as a supply source for backwinding, doubling, twisting, knitting, and weaving.

A winder redraw and a twister with 6-in. rings were shown by Fletcher Works. The redraw runs 500 yds. per min. on 8-oz. bobbins and 750 yds. per min. on 2-lb. bobbins. The twister makes a 5-lb. package at high speeds.

An automatic cone winder that makes a 9° 36′ taper cone was shown by Foster Machine Co. Production per operator per hour is 100 to 300% greater than older models. The company also showed a high-speed filling winder that has a spindle speed of 15,000 rpm.

Quiller Doubles Speed

A radial quiller that runs 10,000 rpm., compared with 5,800 rpm. for older models, was shown by Abbott Machine Co. The machine keeps running while doffing and has compensating tensions and an improved slub catcher.

Other Abbott machines demonstrated how to wind on 7-in. perforated stainless-steel dye tubes. The nylon traversing cam that weighs only 1 lb. was on display also.

Three improved Scharer winders were shown by Yeoman's Textile Machinery Co. All of the machines have increased speed to 11,000 rpm. and added improved doffing arrangements. One machine is equipped with the Draper automatic filling magazine, one doffs on pinboards, and one has different size boxes for colored filling.

A high-speed Autocopser quiller was shown by Terrell Machine Co. This machine has a winding speed of 12,000 rpm. and is equipped to supply Draper automatic filling magazines.

Terrell also showed a completely automatic bobbin cleaning, handling, and conveying system that can clean 100,000 bobbins per shift.

A take-up machine with a 12-in. traverse that produces bobbins up to 14 ins. in diameter was shown by Universal Winding Co.

A yarn-texturing machine that has a 10-in. traverse and makes 10-in.-dia. packages at high speeds was shown by U. S. Textile Machine Co.

A twister shown by Collins Bros. Machine Co. featured a spindle that stops instantaneously and makes knot-free yarn.

A 10-gauge twister with an 8-in. ring that makes 9-lb. packages was featured by Meadows Mfg. Co. The machine is equipped with antifriction and ball bearings and operates at high speeds.

Auxiliary equipment and attachments shown included one electronic slub catcher, one mechanical slub catcher, a tension assembly with slub catcher and waxer, improved ceramic tension devices, an electrically controlled tension, a yarn conditioner and marking attachment, and a split-base twister spindle with prelubricated bearings.

Warping, Slashing, Weaving

Throughout the show, mill men crowded the booths of manufacturers showing warping, slashing, and weaving equipment. With these three categories about par with the textile industry's over-all figure of 59% of all machines over 13 years old, indications are that much new equipment will be installed in mills during the next several months.

Higher speeds, labor savings, and less material spoilage point to machine payoff of approximately 47% of this equipment within three to five years.

New warpers with a sleek look were running at high speeds. Better drives and brakes and push-button start-and-stop controls contribute to smooth operation for fewer broken ends and more-uniform warps.

A warper with beam flanges 40 ins.

in diameter and 54¼ ins. between flanges was running at speeds up to 1,000 yds. per min. at Cocker Machine & Foundry Co.'s booth. Features of this warper are spindle drive from both ends of the spindle, air-controlled doffing, full yarn-density control, and constant yarn-speed control.

A warper and creel made by Plutte & Koecke & Co. and running in the booth of Atkinson, Haserick & Co., Inc., produced a uniformly tensioned warp of filament man-made fiber. An adjustable-speed motor controlled by start-stop push buttons at both the warper and creel make the machine easy to operate.

Beams Advance With Warpers

For better warping, lighter and stronger wood section beams for rayon and nylon were offered by Allen Beam Co. The beams have 40-in. heads, are 54½ ins. long, and hold approximately 2,000 lbs. of yarn. Aluminum section beams for cotton and other spun yarns, balanced to run 1,000 yds. per min., were demonstrated by Hayes Industries, Inc., and R. E. L. Holt, Jr., & Associates.

A drawing-in machine that draws from 35,000 to 40,000 ends per 8-hr. shift was running at Uster Corp.'s booth.

The machine requires no special heddles or frames and draws warps up to 28 harnesses.

A high-speed tricot warper that runs two beams at once side by side was shown by Cocker Machine & Foundry Co. This machine has air-doffing, air-controlled presser roll, and individually rheostat-operated Warner electric brakes.

Sturdy Slashers Run Fast

New slashers show the results of experiments in controls the last few years. Now the slashers are built with controls that give trouble-free operation.

All three new slashers shown were strengthened greatly in framework to withstand wear and vibration and to insure sturdy cylinder operation at high speeds:

1. A model made in either 9 or 11 cylinders strengthened all over is West Point Foundry & Machine Co.'s newest offering. It has larger journals, antifriction bearings, and sprockets for cylinders; cylinders 6 ins. wider than standard width; covered steam manifold; traversing headstock and tailstock; and double immersion rolls in the size box. Drying capacity is 1,200 to 1,700 lbs. per hr.

2. An all-purpose slasher made by Cocker Machine & Foundry Co., has 5, 7, 9, 11, 13, or more cylinders. Cylinders are driven with larger sprockets and chains, they have extra-heavy journals and sealed bearings, air-operated carrier and delivery rolls, air-operated presser roll, and self-locking rod holders.

3. A slasher made by Textile Shops has adjustable lease rods for up-and-down and back-and-forth movement with the sides lowered for easier leasing and counting in ends. It also has a Westinghouse 7½-hp. multimotor drive, adjustable headstock and tailstock, and pneumatic presser roll.

Looms Have Proved Mechanics

Newer mechanical ways of handling filling at looms, tested for the past several years, were put together in looms at the show; these products are already proved in operation.

Over-all increases of 26 to 30% in weaving operation from new looms alone is further increased by (1) reduction in batteryhands, (2) filling handling, and (3) on some looms, cutting out the entire filling-winding job.

Electronics moved into weaving this year for the first time when two developments were shown: (1) a shuttle-protector motion that stops a loom without the traditional bang-off and (2) a filling feeler that detects the amount of filling on a bobbin at the loom lay without touching the filling.

Automatic Filling Handling Is In

Draper Corp. stressed high speed with automatic filling handling in two models of looms shown:

1. A 50-in. X-2 loom that runs 185 ppm. has these features: filling magazine with a 20-hr. supply of filling; Tru-Tension let-off that insures a constant rate of yarn delivery; and automatic lubrication of the picking motion, camshaft and crankshaft bearings, and harness cams.

The capacity of each magazine is 96 bobbins of 1¼-in. diameter or 80 bobbins of 1⅞-in. diameter. The let-off eliminates many cloth defects commonly made by let-offs; wavy cloth on weaves critical for this defect is eliminated. The let-off is particularly effective on fine cottons and man-made fibers.

2. An 82-in. XP-2 loom ran 153 ppm. on sheeting. The loom has centralized lubrication of harness cams, picking motion, and crankshaft and camshaft bearings.

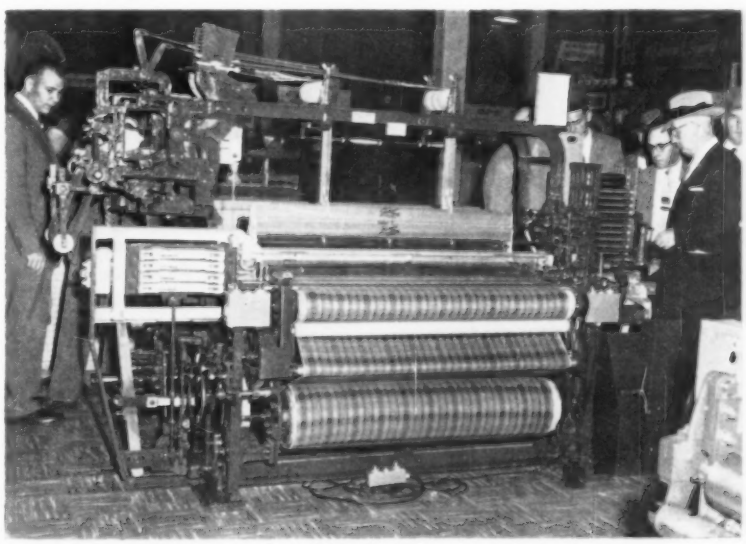
Other features are pin-and-sleeve parallel, No. 4 Bartlett let-off, automatic filling magazine, electric warp stop motion, scissors thread cutter, and No. 14 shuttle check.

Filling-Mixing Loom Winds Filling

An XD filling-mixing loom was running nub yarn with Universal Winding Co.'s Unifil loom winder. This is the first time that the winder has been shown on a loom running more than one shuttle; and on this loom, all filling is of one type.

In the booth of Crompton & Knowles Corp., three looms were running that received the attention of men interested in multishuttle looms.

A narrow-fabric C&K needle loom



with 1,400 sheds per minute was weaving two tapes at once; this output is equivalent to 2,800 sheds per minute; two picks are inserted in each shed. Weaving efficiency is said to be as high as 95%, and a weaver can run 40 to 50 looms.

Electronics Comes to Looms

A 54-in. 4x1 loom, C-7, was running 185 ppm. in C&K's booth. A paper-indication dobby was used to weave checked dress goods; this dobby will weave 2,000 picks with only 20 ft. of paper. The loom has push-button starting, stopping, and reversing the shed. An electric shuttle-protector motion eliminates shipper handles.

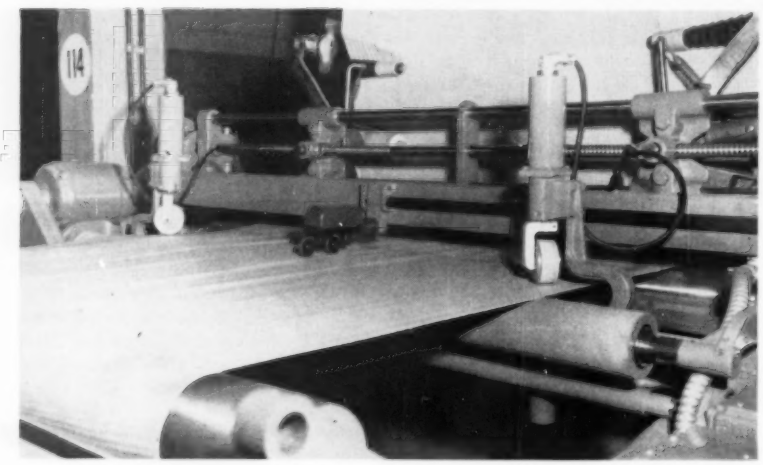
A C&K pick-and-pick 4x3-box automatic loom was also shown by Crompton & Knowles. It has an electronic feeler, and filling yarn is not touched.

Loom assignments and production are said to be about as high as on conventional 4x1 box looms. The loom is 82 ins. wide, has space for 25 harnesses, and was weaving worsted suiting at 125 ppm.

A completely new machine with a 50-year background of textile use was shown by James Hunter Machine Co. This machine, a needle loom, has been developed for needling or felting fabrics of natural, man-made, and blended fibers.

Increased needle density and higher speed with almost vibrationless running are moving this machine into many mills making nonwoven fabrics.

Bleaching, Dyeing, Finishing, and Cloth-Room Equipment



Although the Southern Textile Exposition is primarily a fabric manufacturers' show, several makers of dyeing and finishing equipment offered new drying machines, nappers, controls, and auxiliaries.

The trend toward better control and higher production continues strongly. At least three primary U. S. manufacturers of cloth-finishing equipment are allied with European concerns in similar work or are licensed to produce their machines in the U. S.

Much attention has been given to stepping up dryer efficiency and product quality.

Nappers Are Improved

Nappers, once pretty well standardized at 24 rolls, are now available in 30- and 36-roll models in American and European makes. Models shown from both sides of the Atlantic feature greatly improved control systems that permit precise settings of the worker rolls.

A Gessner napper-roll grinder was shown that uses a hollow abrasive wheel to produce a long, tapered point on wire previously side-ground by another grinding head on the same machine.

Drying Equipment

Proctor & Schwartz, teaming up with Artos of Hamburg, Germany, and Dalglish of Scotland, is in production with a tenter dryer that is low in profile and boasts extremely even delivery of hot air across the entire width of the fabric from above and below. Some idea of the potential drying efficiency can be gained by noting the horsepower applied to the fans: 140 hp. for a seven-section, 70-ft. housing, which is normal for a 90-ft. tenter.

Another Artos development is a tensionless, single-pass dryer that supports the drying fabric entirely on opposed columns of air. The machine is used mainly for predrying in conjunction with tenters or for special applications. A double-strand, two-pass model is available.

Famatex, represented by Robert Reiner, Inc., was promoting a more-accessible housing for its tenters, which also featured a simplified design of gas-heating supply pipes. Famatex showed an improved ball-bearing combination clip-and-pin chain that permits improved air circulation at the selvage.

Marshall & Williams featured a light-duty tenter designed for cloth rooms or for steaming finishing fabrics. The company is stressing design-for-use to provide equipment that is best adapted for the intended purpose.

A perforated-drum drying machine that will handle loose stock, tow, knitted fabrics, hanked yarn, or other discontinuous material was shown by Saco-Lowell, agents for Fleissner, the manufacturer of the equipment. Rapid and even drying of textile materials is claimed for the machine. Openers and feeders designed to work with the dryer are available.

A European-designed packaged-yarn dryer of high efficiency was listed as a new manufacture of Gaston County Dyeing Machine Co. but was not shown. A typical 500-lb. load of cotton yarn can be dried in 40 to 50 mins. by the Model 200 machine.

Refinements in cloth-guiding and bow and skew removal are tending to cut labor costs in finishing plants and improve the product materially. Mount Hope Machinery Co. has developed a skew-sensing unit that employs the skew itself to actuate a corrective mechanism for any weight or density of fabric.

Fife Mfg. Co. featured automatic guiding equipment that employs a cambering roll to shift cloth position to align the material so it will batch

up evenly. Sensing heads operate on a vacuum principle, which triggers hydraulic cylinders that move the roll carriage, or the cambering roll, or both if necessary.

Cloth-Room Equipment

Cloth-room equipment is beginning to take on stature as more attention is paid to refining and improving examining perches, sewing machines, and conveying systems. Automation has finally caught up with one model of gray-goods inspection machine available from Special Instruments Laboratory, Inc. This machine detects slubs and holes, counts them on separate counters, and sews in a red thread on the selvage opposite each defect. An auxiliary device will also detect oil spots and spray them with a detergent. Operating speed is up to 6,000 yds. per hr.

Other makes show improvements in quick-release drives that permit dropping an inspected cut to an inclined table on which it rolls to a conveyor that takes it to storage. Variable speed and reversing actions are common, as are antifriction bearings.

Noticeable reduction in weight brought about by stamped and welded frame members was evident in several lines of sewing and batching equipment. An added advantage of this type of construction is lower manufacturing costs, which are reflected in selling prices.

Curtis & Marble Machine Co. showed a high-speed selvage trimmer that is equipped with an electric-eye selvage-following unit. A railroad sewing machine with a Singer head produces a loop stitch that starts before the head engages the fabric. The same firm also exhibited a new cloth-inspecting perch that has a reversible hydraulic drive.

Auxiliary Equipment & Supplies

Lubrication of mill machines is tending toward centralization. Both fluid and atomized lubricants and lubricating devices were much in evidence.

Three centralized lubrication systems for most textile-machine applications were shown: (1) Lincoln Engineering's Ram-Pump that's controlled electrically was on a loom, (2) C. A. Norgren's Micro-Fog in a totally enclosed cabinet, and (3) Stewart-Warner's Accumite for old or new machines.

Oils that scour out easily were featured by the Shell Oil Co. Gulf Oil Co. showed new heavy-duty greases for extreme pressure applications.

Floor-maintenance equipment was shown by three firms. Advance Floor Machine Co. featured a one-shot wetting, scrubbing, and drying machine. G. H. Tennant Co. showed a high-speed brushing and waxing unit and a power sweeper. Finnel Systems, Inc., displayed a battery-powered scrubber and vacuum dryer of 18-in. capacity.

Probably the simplest floor cleaning device ever shown was displayed by Excel, Inc. A brush mounted under a bobbin truck sweeps up lint as the operator travels about the room.

Conditioner Aids Filling Winding

A yarn conditioner to be attached to the Abbott quiller was shown by Mona Industries. Filled bobbins are rolled over a spongy surface wet with a conditioning solution just as they are doffed and pick up enough moisture to set the twist. No extra labor is involved.

Yarn-tensioning devices showed considerable refinement. One system applicable to creels uses magnetic force to apply tension. Tension at all points can be regulated by a single rheostat.

Improved materials for maintenance such as paints, floor-treatment compounds, and disinfectants point up the continuing effort to make mills attractive and healthful work places.

Corrosion-resistant coatings and Teflon coatings for drying cans continue to grow in importance.

Generally, mill supplies of all kinds show the result of engineering designed to make a better product or one specifically suited to an application.

Both Nemo Industries and Thermal Equipment Corp. showed instantaneous starch cookers of advanced design.

Drives Improve All Machines

New drives spotlighted the mill engineering section: (1) wool spinning-frame variable-speed drive developed by Davis & Furber and Louis Allis that increases frame speed 20%; (2) Westinghouse's 1- to 200-hp. power reactor that gives a.c. control for d.c. motors; (3) Allis-Chalmers 5- to 200-hp. package drive units for a range of drives; (4) Reliance Electric's all-electric variable-speed drive in ½ to 4 hp.; (5) T. B. Wood's complete line of card, variable-speed spinning, and other drives; (6) Square D's electronic speed-control drive; and (7) Cutler-Hammer's electronic packaged-drive unit and magnetic-amplifier packaged-drive unit.

Power strapping machines that take all the manual strain out of strapping packages and cartons were demonstrated: Acme Steel's fully powered strapper for tensioning, sealing, and cutting; and Signode Steel's power-strap feeder.

Electronic Counters Move In

Electronic counters for machines all through the mill give better control of yardage and production: Veeder-Root's Count-Pac rated at 20,000 counts per minute and Strandberg Engineering's mass-counting system to analyze machine operation.

Veeder-Root's double-wheel quick-reset yardage counter for machines from cards through the cloth room is reset with a quick flick of your finger. The Chatham loom-stop counter made by Strandberg has also been simplified. WAK Industries also moved

into electronics by showing an electrical impulse counter.

New Lamps Raise Lighting Output

For better plant lighting, three companies showed new or improved lamps: Westinghouse's superhigh-output fluorescent lamps and a cool-green lamp for color matching; General Electric's new Power-Groove fluorescent tube for greater light output and a black lamp to show oil, mildew, and other stains in fibers and fabrics; Sylvania's lighting fixtures and lamps with 2½ times greater output than its former models.

Motors and Starters Are Better

New motors, motor starters, and controls shown give mill men better control of individual machines with little maintenance: Allis-Chalmers demonstrated totally enclosed motors for all machines from opening through twisting. Square D showed its new Visible blades safety switches. Diehl showed a totally enclosed streamlined fan-cooled motor. Louis Allis demonstarted a self-cleaning motor with increased cooling efficiency.

Steam traps, valves, and rotary joints have been improved so greatly that they can be all but forgotten after they're put in service. Perfecting Service exhibited an automatic steam trap in sizes of ½ through 2 ins.; it also showed a rotary union in pipe sizes of ¼ through 3 ins. Johnson Corp. demonstrated its new rotary pressure joint on a mock-up slasher. Jenkins Bros. showed its valve with stainless-steel armor seat.

Casters and Bearings Last Longer

Casters that are so small in size and so often big in maintenance cost have improved features. Faultless Caster Corp. showed a complete line of textile casters for special temperature and chemical conditions. Darnell Corp. showed several types of its line of over 4,000 casters and wheels designed to cut cost. Bassick Co. featured casters with rubber, plastic, and metal wheels.

All through the show on all machines, antifriction and grease-sealed bearings were in evidence. Dixie Bearings showed sealed bearings of a type said to have been used to support cylinders on spinning frames for two years without a breakdown.

Ridge Tool Co. demonstrated just about a complete machine shop in action: work-saver hand wrenches and other tools, power pipe threaders, broken-screw extractors, portable power-drive threading machine, tubing cutter, and many other machines.

Three companies showed paints manufactured especially for textile conditions: (1) Barreled Sunlight's heavy-duty paints, Gilman's and Olney's chemical-resistant coating, and Minnesota Paint's mill whites, tints, and special enamels.

An all-purpose steel framing angle was featured by Acme Steel Co., Dexion Div. Textile uses are shelving, scaffolding, ladders, tables, motor and machinery mounts, mezzanine structures, and others.

Traveling loom cleaners showed the results of great improvements since the last Greenville show: American Moistening Co.'s Heliclone, Parks-Cramer's traveling cleaner in connection with a portable loom cleaner, and American MonoRail's cleaner that dumps the pickup.

Loom Parts Are Improved

Improved loom parts and supplies were numerous, and they reduce loom-fixing time greatly.

H. J. Theiler Corp. showed the Loepfe Optical-electronic bobbin feeler on a C-5 loom weaving terry towels. This loom also had a Staubli

CONTINUED ON PAGE 150

Testing and Control Equipment

Testing machines for yarns, fibers, and fabrics reflect the present trend toward speed and high quality that is exhibited in the manufacturing end of the industry. Testers have become simpler to operate while actually becoming more complicated.

A testing machine that measures the internal bond of nonwoven fabrics was shown by Scott Testers, Inc. The same firm has developed a constant-rate-of-tension tensile-elongation tester that indicates and records stress-strain forces on fibers or fabrics in a wide range of capacities.

Fiber-length and proportions of fibers of one length are more readily estimated by a machine that not only draws the conventional graph but runs up a digital figure for each sample. Fiber fineness can be tested in another machine at the rate of 400 samples per hour, with two operators. Both machines were shown by Special Instruments Laboratory.

Process control from practically any angle is possible today with the instruments that are now available. Tension, mass, moisture content, pressure, temperature, flow, and chemical concentration are among the important phases of processing that have yielded to precise regulation.

This year considerable emphasis has been placed on electronics as a control-actuating medium. In some cases there has been a trend away from multitube machines because of the trouble from failure of only one tube in a series. Replacement of groups of tubes in modular units cuts down this trouble. Other manufacturers have developed neon glow lamps that indicate trouble in the controls based on electronic tubes.

Compressed air is still the prime actuator in many instruments; one refinement eliminates pilot bleed valves that in multi-instrument installations consume significant quantities of compressed air.

A new magnetic principle actuates a flow meter shown by Foxboro Co. Designed to control the flow of chemicals to a treating bath, the meter can be set to deliver as little as 1/100 gal. per min.

Another Foxboro instrument controls viscosity of coating on sizing solutions, with a viscometer to detect and monitor solution viscosity.

The amount of stretch that is being applied to warps as they are slashed can be recorded by a new air-operated Foxboro instrument.

Hunter Controls, Inc., showed an improved psychrometer that indicates, records, and controls moisture in yarn or fabric being dried.

Taylor Instrument Cos. showed a new low-cost temperature transmitter operated by air that can actuate control equipment placed at a distance. Complete control of dyeing cycles is possible with another Taylor instrument that can set up rate of rise, temperature hold, cooling rate, and any other important factor.

A portable uniformity meter for carding, drawing, roving, and spinning that checks work in process was shown by Universal Winding Co. Effect of changes can be observed as they are made, and faults can be immediately corrected at the source without worrying about trial-and-error compensating changes in other areas.

RIO GRANDE'S 1958 COTTON is better than average

USDA fiber and spinning tests on early-season cotton show that in comparison with 1957 cotton—

- Grade is about the same
- Staple length is slightly shorter
- Manufacturing waste is lower
- Yarn appearance is off

By **F. L. GERDES**, Cotton Technologist, USDA, Retired

EARLY SEASON PICKINGS of the 1958 Lower Rio Grande Valley cotton crop show high grades comparable with the grades produced at the same stage of harvesting last season when quality was the highest on record.

Manufacturing-waste figures for Strict Middling cotton indicate an average percentage equivalent to that usually associated with Good Middling cotton. The 6½% average in 1958 is 1½% lower than the previous year's average for the area.

This improvement is attributed to the extensive use of double lint cleaning and combing by gins to improve the grade of the 400,000-bale record crop.

Staple Length Is Average

While staple length is not quite up to normal, yarn strength compares favorably with the five-year average for the area. Break factor (average of 22s and 50s yarn) for the new crop is comparable to that usually produced by cotton stapling at 1 3/32 ins. The 1958 factor is slightly lower than the 1956 and 1957 factors, but it is better than the 1954 and 1955 factors.

Micronaire values average 4.7, higher than the 4.5 five-year average. The 10-year average for the United States is 4.3.

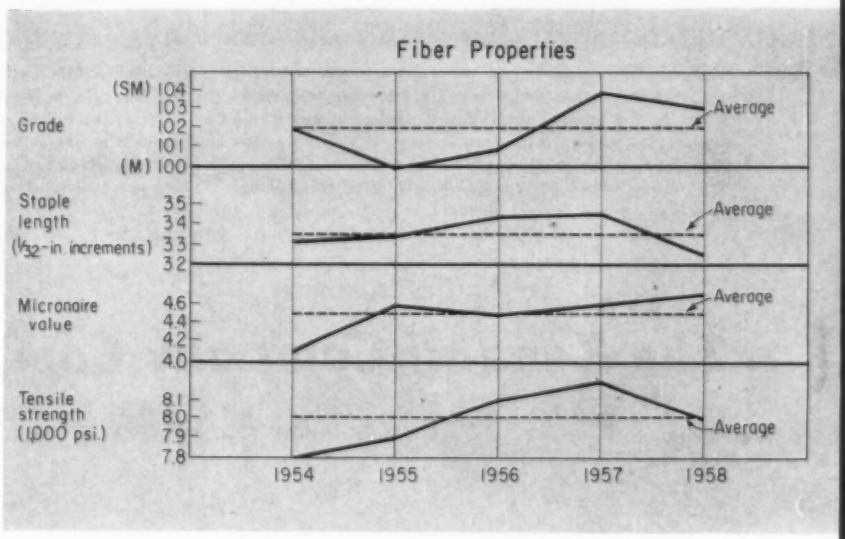
Yarn Appearance Is Off

In spite of the higher Micronaire values, the yarn-appearance index was slightly below average for the area. During the 1955-58 period, there appeared to be a direct relationship between yarn-appearance grades and the number of neps in the card web. The reverse was true in 1954.

Since 1954, there has been a definite tendency toward:

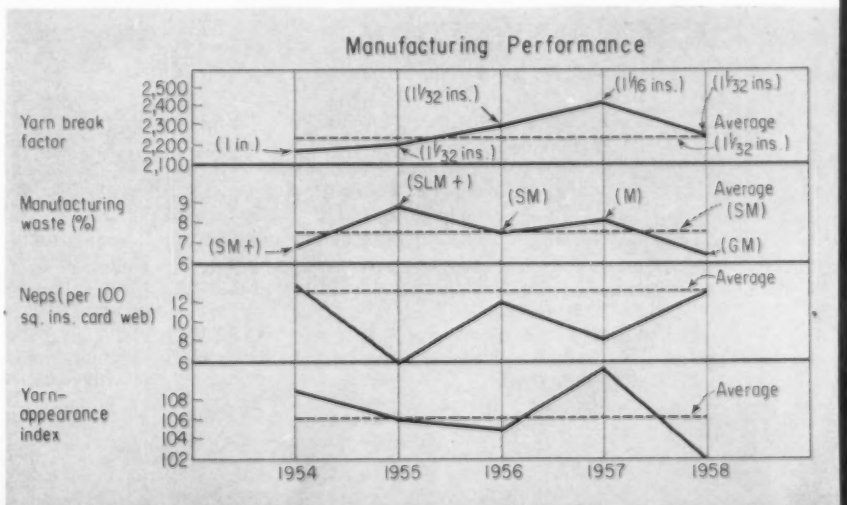
1. Improved grades
2. Longer staples, except for a drop in 1958
3. Progressively higher Micronaire values
4. Higher yarn strength, except for a slight drop in 1958
5. Wide seasonal fluctuations in manufacturing waste, neppiness, and yarn-appearance grades.

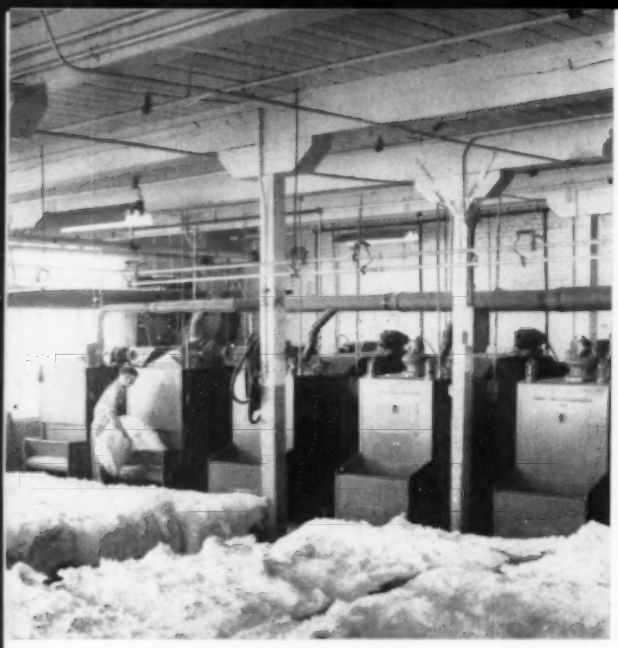
Based on data from USDA fiber and spinning tests.



FIBER PROPERTIES in most instances are better than the five year average and compare favorably with last year's crop, which was the best on record in terms of quality.

MANUFACTURING PERFORMANCE is about average except for a drop in appearance. Figures in parentheses indicate average staple and grade associated with given performance factors.





OPENER ROOM—Only one cotton mix is used, and the cotton is opened in the warehouse 60 bales at a time. From the F-7 feeders, the cotton is carried by air to the cleaning equipment in the picker room in the plant. The cleaning line consists of four No. 11 condensers, two overflow reserve boxes, one Axi-Flo cleaner, one No. 12 lattice opener, and one inclined cleaner.

PICKER ROOM—There are three one-process pickers, and each has a 16-in. two-blade beater. They also have blending reserves, No. 7 eveners, and pneumatic racks and fringe rolls. The pickers deliver a 14-oz., 60-yd. lap. All the cards have 18x42-in. coilers. Each can holds 40 lbs. of 52½-grain sliver. The doffing cycle is 4 hrs. Each tender has 55 cards.

The Kendall Company Completes $1 1/2-MILLION IMPROVEMENTS

At its Albertville, Ala., plant, bought in 1956, The Kendall Company has just completed a 2½-year modernization program. To obtain the new fully integrated print-cloth mill, Kendall—

- **Enlarged the plant**
- **Installed new spinning**
- **Rearranged all machinery and lights**
- **Built a new cloth room**

The Kendall Company, Cotton Mill Div., Albertville, Ala., put the final touch on a $1½-million modernization late last month when it showed 1,500 visitors the results of constant improvements made the last 2½ years.

At a special get-acquainted day, Kendall President Richard R. Higgins and other top-ranking officials showed what can be done to bring a mill back to profitable productive capacity.

The single-story building now has straight-line processing and plenty of room for expansion.

A 42x130-ft. addition and basement were added to the mill, and the entire building was covered with a new tar-and-gravel bonded roof.

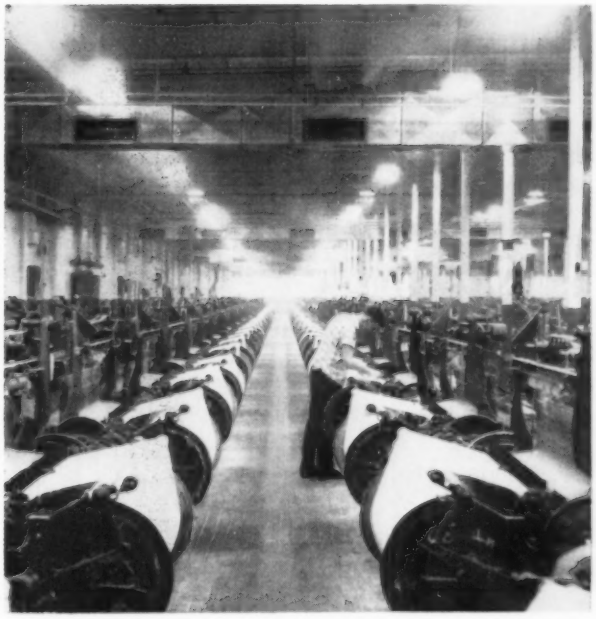
The roof is supported by steel columns and beams.

The cloth room, machine shop, and supply room were relocated; most of the mill machinery was also relocated. New conduit and motor starters were installed in carding, spinning, and weaving. Lights were rearranged for better illumination.

Many minor details of building and equipment add to plant efficiency: (1) a well-stocked supply room with machine parts in neatly labeled steel bins, (2) machine shop equipped for most repairs, (3) steel workbenches with hardwood tops and drawers for tools and loom parts at each loomfixer's section, and (4) full-width portable tying-in machine that ties 280 knots per minute.

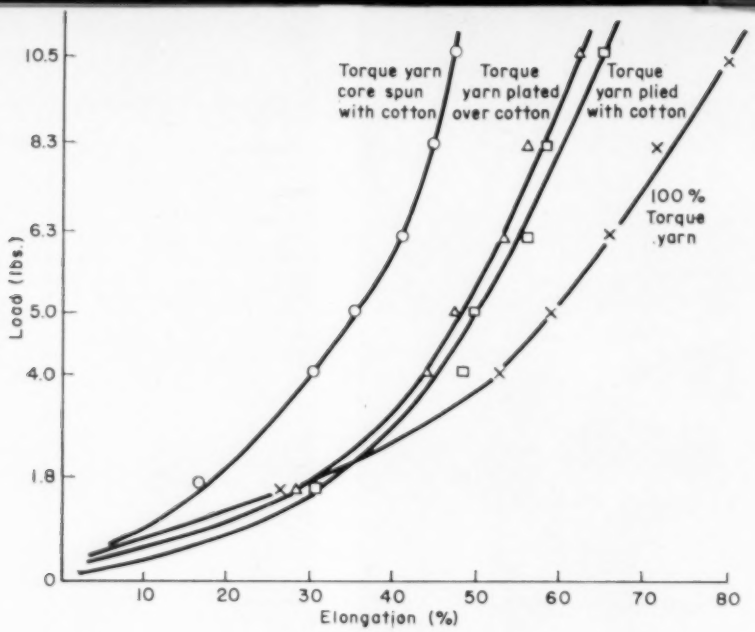
CARD ROOM—Drawing lappers produce a 30-lb. lap, and 16x42-in. coilers on the drawing deliveries make it possible to put 30 lbs. of 54½-grain sliver into the cans. The drawing frames have a four-over-five drafting system with a speed of 150 ft. per min. The five roving frames have 120 spindles each. Roving packages are 10½x5 ins. and weigh 34 oz.

SPINNING ROOM—Warp yarn is delivered on 10-in. paper tubes, and filling yarn is spun on 8¾-in. quills. The 38 warp frames have 2-in. rings, and the 34 filling frames have 1-7/16-in. rings. Frames have antifriction spindles, center-suspension drafting system, umbrella creels, centralized lubrication, vacuum end collection, and traveling frame and ceiling cleaners.



WEAVE ROOM—Loom speed of the 66 looms 40 ins. wide and 555 looms 44 ins. wide is 160 ppm. A dry-duct air-changing system with atomizer humidifiers was added, and windows were bricked up. Looms are positioned at the back for 24-in.-dia. yarn beams. Weavers' alleys are 22 ins. wide so that rolls of cloth 15 ins. in diameter are woven; cloth is doffed in five-day cycles.

CLOTH ROOM—The cloth room is in a basement under the new section of the weave room. Cloth is moved from weaving to the cloth room by an automatic conveyor. Gray cloth is sheared, brushed, and folded. Then it's inspected and burled one fold at a time on tables. Inspected cloth is baled and then trucked to a nearby warehouse for shipment.



ELONGATION of rib socks made from core-spun stretch yarns is poor compared with socks made from all-stretch torque yarns. Plating and plying methods of combining stretch with nonstretch yarns compare favorably with each other.

Select Yarns and Methods To Make Better STRETCH SOCKS

Recent tests made by the U. S. Army on wool and cotton stretch socks show that—

- **Torque yarns give greater elongation than nontorque yarns**
- **Plating or plying yarns gives better results than using core yarns**
- **Chlorination treatments affect stretch socks**

STRETCH-NYLON YARNS in combination with cotton and wool yarns were recently investigated in an effort to reduce the numbers of sock sizes procured by the U. S. Army. Plating or plying stretch nylon with nonstretch yarns was found to be satisfactory for military-hosiery use.

Torque-type stretch yarns were found to provide greater elongation than the nontorque types. The elongation of stretch socks is practically unaffected by laundering.

The resistance to dimensional change from laundering is greater in stretch socks than in standard nonstretch military socks. To insure optimum performance of stretch-type cushion-sole socks, the wool used in these socks should be shrink-resistant treated in stock, top, or yarn form.

Stretch Yarns Are Defined

Stretch yarns are divided into two basic groups. Torque yarns are produced on the twist-heat set-untwist method, and nontorque yarns are obtained by introducing a coiled or crimp effect in the yarn by drawing yarns over a heated blade or forcing them into a heated stuffing box.

Field tests showed that 100% stretch-nylon socks were as comfortable as the standard sock. The life expectancy of the stretch sock outlasted the cotton sock by an average ratio of 1.7 to 1.

The three-size system in the stretch-nylon sock provided as good a fit as the nine-size system of cotton socks. Satisfactory fit was obtained by using the medium-size stretch sock for foot sizes ranging from 9 to 13.

Some concern was felt, however, that physiological effects might be experienced in some individuals as a result of nylon being worn next to the skin under continuous wear and rugged use. Fortunately stretch yarns may be used with other yarns spun from natural fibers, and different manufacturing techniques can be used to produce socks in which little nylon will contact the skin.

Several of these yarns and manufacturing systems were investigated to determine which possessed the greatest advantages for use in military hosiery. These methods included plating, plying, and the use of core yarns.

Yarn Type	Original		Laundered		
	Elongation	Recovery	Shrinkage	Elongation	Recovery
	(%)	(%)	(%)	(%)	(%)
100% torque yarn	57.0	90.0	5.9	49.5	90.7
Torque yarn A plated over cotton	49.3	87.8	6.7	47.8	91.5
Torque yarn A plied with cotton	52.0	89.1	5.2	55.2	92.5
Torque yarn A core-spun with cotton	35.3	90.0	5.2	38.7	89.5
Standard cotton	9.7	73.3	6.4	13.5	77.0
Torque yarn B	36.4	84.2	2.2	52.8	91.8
Nontorque yarn C	28.2	86.5	1.5	32.3	94.2
Nontorque yarn D	24.7	79.7	2.2	33.0	85.2

EFFECT OF LAUNDERING on the shinkage, elongation, and recovery of ribbed stretch socks shows that most stretch yarns increase in elongation after laundering. This increase may be because of excessive overboarding.

How Yarns Were Knitted

In plating, a stretch and nonstretch yarn are knitted together so the stretch-nylon yarn appears on the face of the sock and the nonstretch yarn is next to the skin. In plying, a stretch yarn is twisted together with a wool or cotton yarn and the plied yarn is knitted. In core-yarn knitting, a stretch yarn is used as a core and a cotton or wool yarn is wrapped around it.

Plated socks were knitted from 140-den. nylon plated on 40s cotton on 168-needle Komet machines in 6x3-rib construction. Two types of torque yarns and two types of nontorque yarns were used.

Cushion-sole socks were made from nylon yarn plated over wool terry. The nylon was 140 den. and the terry 1/20s worsted. The sock was a plain jersey construction made on 120-needle Banner machines. Two torque yarns and two nontorque yarns were used.

These socks were then tested for elongation, recovery, dimensional stability, shrinkage, and chlorination. The first three tests were done on a Schiefer sock-measuring device.

Core Yarns Are Poorest

The use of 100% stretch nylon gave the greatest elongation, and the core-spun yarn gave the poorest elongation. The complete envelopment of the stretch nylon with a relatively nonelastic element appears to restrict the elongation of the combined yarn.

Socks made by the plating or plying systems fall between the elongation of the all-stretch and the core-spun yarns. Socks made by the plating and plying systems are similar in their stretch properties.

Torque yarns, when employed in a plated system on rib socks, have greater elongation than nontorque yarns. Certain torque yarns also possess greater elongation properties than other torque yarns, and nontorque yarns differ in elongation characteristics.

The elongation pattern is similar for cushion-sole socks plated over wool terry. Because wool is used for these socks, the elongation of the standard sock is about twice that of the standard cotton sock.

Subsequent field trials have shown that cushion-foot stretch socks made from torque yarns provide better fit and are more comfortable than the standard socks. The stretch socks also shrink less after laundering.

Laundry Tests Are Made

Tests after laundering showed that socks made from the plied system increased in elongation. The elongation of the plated sock changed little after laundering.

Socks made from all-nylon showed the greatest loss in elongation because of laundering. Core-spun yarns showed a slight increase in elongation after laundering, but they still show the poorest results.

This increase in elongation may be due to overboarding of the socks in the finishing operation. For instance, if the socks were knitted to a 10-in. foot size and boarded to 11 ins., the sacks would shrink to 9 ins. after laundering.

When the 5-lb. load is applied to determine the elongation, the lengths of the original and laundered sock are about the same. The percentage of elongation of the laundered sock will be greater than that of the original sock because of the shorter length on which the stretch is based.

The method used to make the stretch yarn also may affect this increase on elongation. The crimp in the nontorque yarns possibly undergoes a change after laundering.

Laundering had no significant effect on the recovery of the stretch rib or cushion-sole socks regardless of the yarn or yarn combination. The dimensional stability of the stretch socks after laundering was generally better than the standard cotton socks.

Chlorination Affects Socks

Two basic yarns used to knit standard cushion-sole socks are worsted yarns for the terry loops and a 50-50 wool-cotton blend for the remainder of the sock. Because of the felting tendencies of wool, it is treated in the stock, top, yarn, or sock stage to resist felting. The controlled chlorination method is generally used.

This treatment affects most stretch-nylon yarns; so it should be avoided when socks contain stretch yarns. The chlorination treatment reduced the elongation and recovery of three-fourths of the stretch socks tested. The treatment also affects the bursting strength of all-nylon stretch socks.

The investigation, which was carried out by the Quartermaster Research & Development Center, U. S. Army, showed that the stretch concept can be used successfully in military hosiery to reduce the number of sizes and to provide better fit, longer wear, and better stability to laundering.

DAMAGE can be caused by a slam-off, especially if the shuttle is trapped in the shed.

Keep LAY GUIDES Aligned And Looms Will Run Better

The lay guide plays an important part by preventing side lash of the loom lay. Correct adjustment and maintenance of the guide and followers—

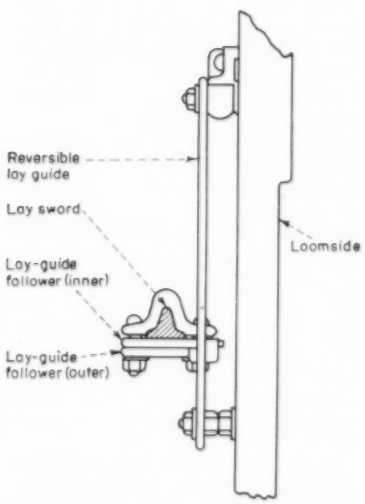
- **Lessen wear to many loom parts**
- **Help prevent warp break-outs**
- **Reduce malfunctions of the battery**

THE LAY GUIDE is one of the most neglected parts of a loom. In the average weave room, looms can be found that are running with loose, worn-out, or even missing lay guides and lay-guide followers. If loomfixers realized the importance of the lay guides, they would give them the same kind of preventive maintenance they give shuttles, batteries, and other parts.

The primary function of the lay guide is to steady the lay and prevent lateral motion. If the lay has just a small amount of end play, the play can affect the filling-changing mechanism, the beat-up, and the picking motion.

A slight end movement of the lay can cause the shuttle to be out of alignment with the battery. When filling is transferred under this condition, any one of several accidents can occur: the full bobbin may not be seated firmly in the shuttle, and the exhausted bobbin may not be fully ejected; the full bobbin may hit the spring cover and not slide down into the spring; the spring may grip the bobbin by two rings, one ring, or not at all.

Any of these malfunctions can cause serious damage: the bobbin can be broken and the filling ruined; loom parts such as transferrer, shuttle feeler, shuttle, or even the loomside can be broken; many warp ends can be broken; and sometimes injury to weavers, loomfixers, or other personnel is caused.



LAY GUIDE and its component parts should be complete for proper loom operation.

End Play Causes Loom To Slam

End play of the lay can cause an erratic beat-up. This end play can result in uneven cloth and broken warp ends, especially in the selvage.

The picking motion can also be affected by end play of the lay. The shifting of the lay will cause an uneven pick and will kill some of the picking power. This in turn will cause the loom to slam—and slamming is the worst thing that can happen to a loom. Repeated slamming will practically knock it apart.

The movement of the lay, however slight, from side to side at every pick will cause wear to the crank arms and rocker-shaft bearings and further wear to the lay guide and lay-guide follow-

CONTINUED ON PAGE 158

Tips on Spinning LOOP YARNS

• Loop yarns made from mohair and man-made fibers or wool are passing through a period of popularity. These yarns are not difficult to make, and this article tells how machines can be set up to produce them.

THE DEMAND FOR LOOP YARNS FLUCTUATES according to fashion, and right now knitting mills are finding fabrics made from these yarns profitable items. Loop yarns are generally made by mills who specialize in fancy yarns, but they can be made without difficulty if the right materials are used.

The effect or looping yarn must be a material that can be formed easily into loops. Such yarns are cross-bred wool, filament rayon, or mohair. The most suitable natural fiber is mohair. This fiber requires lower speeds than other natural fibers, and it is usually drawn on open drawing machinery and spun on flyer frames.

Loop yarns are made on fancy-yarn twisting frames and converted dandy rovers. The latter are suited for certain yarns of heavier construction.

The two ground threads pass through the back rolls, over a guide rod situated above the top front roll, and through the front rolls. The looping thread is passed through the front rolls. The top front roll has two grooves that act as guides for the ground threads while the center of the roller provides the positive nip for the looping thread.

The back and front rolls are driven at different speeds, and the excess delivery of the looping thread over the ground thread causes it to form loops. The natural stiffness of the fiber also helps to form loops.

After spinning, the loop yarn is generally twisted with a binding yarn to give the yarn stability and strength and prevent any unwanted movements of the loops during later processing. The binding thread is twisted with the loop yarn in the opposite direction to the first twist. The binder yarn is often the same yarn as that used for the ground threads.

Here's a typical loop yarn made on a converted dandy rover:

Ground and binding thread—19s worsted, 48s quality

Twist of 19s worsted—12 tpi., Z twist

Loop thread—4s mohair

Twist of 4s mohair—4.5 tpi., Z twist

Package for twisting—8 oz. cheese

Lead of loop over ground yarn—2.2 to 1

First twisting—Two ends of worsted with mohair

Folding twist—12.5 tpi., S twist

Second twisting—With one end of 19s worsted

Folding twist—4 tpi., Z twist

Loop yarns can also be made on ring twisters that have two sets of delivery rolls. The back rolls deliver the ground threads and the front rolls the effect threads. This method usually produces finer loops suitable for women's wear. Spindle speeds are about 3,000 rpm.

Calculations are necessary to find the resultant yarn number and the amount of each yarn to produce a given weight of loop yarn. Here's an analysis of yarns in 12 ins. of loop yarn.

Two foundation threads of 2/20s cotton—12 ins.

One looping thread of 4s mohair—24 ins.

One binding thread of 2/24s mohair—12 ins.

2/20s cotton is equivalent to 15s worsted.

Then, number of hanks plus extra length =

$$\frac{\text{Total hanks}}{\text{Yarn No.}} = \text{parts}$$

$$\therefore \text{15 hanks plus no extra length} = \frac{15}{15} = 1$$

$$\text{15 hanks plus no extra length} = \frac{15}{15} = 1$$

$$\text{15 hanks plus 15} = \frac{30}{4} = 7.5$$

$$\text{15 hanks plus no extra length} = \frac{15}{12} = 1.25$$

$$\text{Total} = 10.75$$

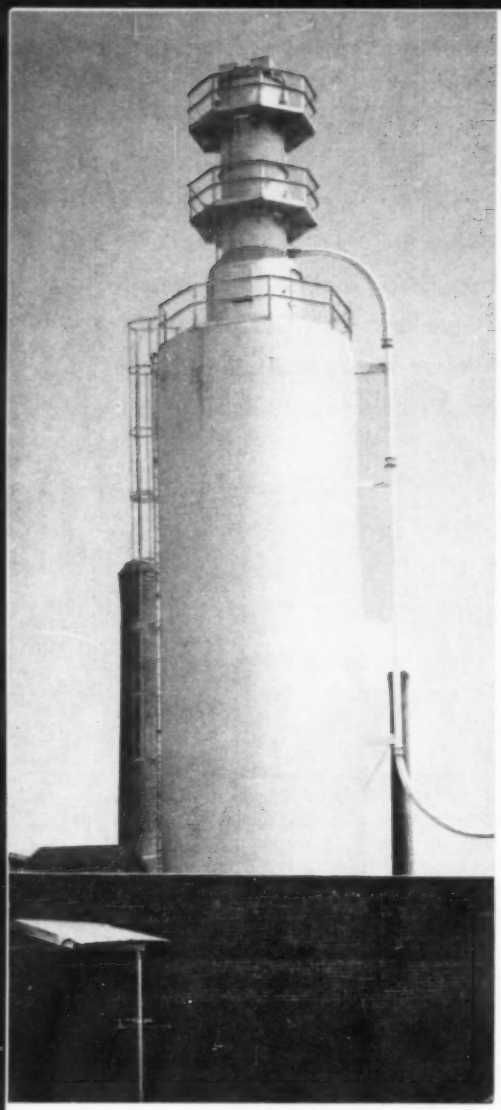
$$\text{Resultant yarn number} = \frac{15}{10.75} = 1.4\text{s worsted (approx.)}$$

If 120 lbs. of this loop yarn are required, then divide 120 by the total parts (10.75).

$$\frac{120}{10.75} = 11.16$$

The weight of each component would be:

2/20s cotton = 2 × 11.16 = 22.32 lbs.
4s mohair = 7.5 × 11.16 = 83.7 lbs.
2/24s mohair = 1.25 × 11.16 = 13.95 lbs.
119.97 lbs.



NEW SLASHERS

Pay Off Fast at Six West Point Mills

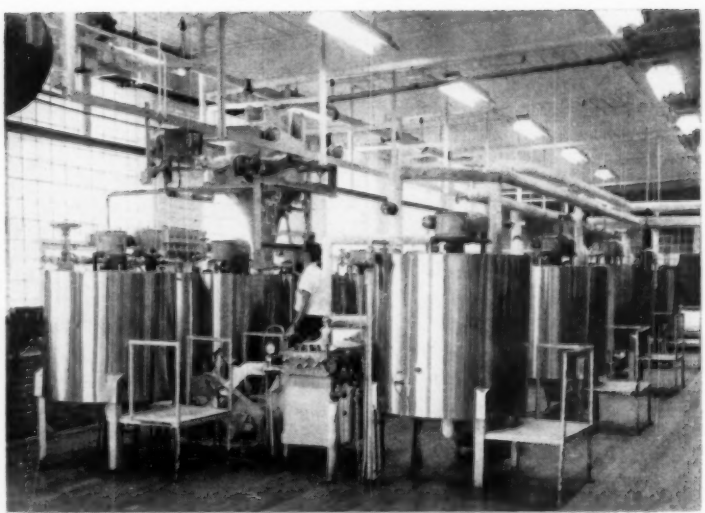
• After an accelerated test of new slashing equipment, West Point Mfg. Co., West Point, Ga., has just completed a modernization program in six mills. The payoff is a quick return on its investment—with greater earnings to come.

300,000 LBS. of pellet bulk starch are stored in this silo at Lanett; at present, 10,000 lbs. are used every 24 hrs.

West Point Mfg. Co. has just put the final touch on a complete six-mill slasher modernization program with a last coat of paint on its Lanett Mill slasher room. The overall program includes 16 new slashers and complete auxiliary equipment.

This large investment bite taken by West Point promises to become a trend in textile spending; the reason—a quick return on the investment; up to 50% annually is realized. Four scattered mills at the recent spring meeting of the Alabama Textile Operating Executives backed up West Point's results—double slasher production with new multicylinder slashers.

West Point modernized its slasher departments only after thoroughly testing and evaluating new equipment in one plant. Now with equipment complete in all six mills, actual production rates are proving the figures indicated by the test.



SIZE-MAKING EQUIPMENT is all new and is: a weighing hopper, stainless-steel cooking kettles and storage kettles, and homogenizers.

Speed Is up to 125 Yds. per Min.

At Lanett Mill, for example, the speed of the four new slashers is 60 to 125 yds. per min. according to the yarn being slashed; a warp of 17s yarn with 6,260 ends runs at 60 to 65 yds. per min.; and a warp of 14s yarn with 2,610 ends runs at 125 yds. per min.

The speed of the old replaced slashers was 30 to 60 yds. per min.

To modernize the slasher departments in the six mills, West Point installed 16 new multicylinder slashers. These slashers replaced 30 old large-cylinder slashers to give a replacement ratio of approximately one to two.

Six Mills Were Modernized

In all six mills, the completed modernization is much the same and includes: slashers, size-making equipment, complete controls for size making and slashers, hoods for the slashers, air-control furnishings, and building renovations.

At Lanett, the new installation begins with a bulk-starch-handling system outside the mill. A silo with a capacity of 300,000 lbs. of pellet starch is about 100 ft. from the slasher room. Starch is received at the mill in tank cars and is pumped to the silo by vacuum.

From the silo, the starch feeds by gravity to a screw conveyor that delivers it to the slasher room.

Size Making Is Automatic

An automatic weighing hopper supported by a monorail takes the starch to any of eight 250-gal.-capacity stainless-steel cooking kettles as it's needed. Here an employee dumps the starch in each kettle as he needs it to complete the size formula.

There are four 400-gal.-capacity homogenizers and four 360-gal.-capacity stainless-steel size-storage kettles. Size is pumped from cooking through homogenizaion and storage to the slasher size boxes.

The size formula is cooked at 212° F., stored at 208°, and kept at 204° in the size boxes. At present, 10,000 lbs. of starch is being used every 24 hrs.

Two slashers have 12 cylinders, and the other two have 10 cylinders. The first four cylinders of all slashers are coated with Teflon; the other cylinders are bare stainless steel. All cylinders are held at the same temperature, 275 to 300° F.

All slashers have double size boxes. Size-box immersion rolls are stainless steel; the squeeze roll and finisher rolls are rubber-covered. Pressure on the squeeze rolls, including the weight of the roll and added pressure, is 750 lbs.

Creels Save 30 to 40 Mins. per Set

An average of 30 to 40 mins. is being saved on creeling each warp set by magazine creels for each slasher. While one creel is running at a slasher, the second creel is being recreeled at the side of the running creel.

Each creel has space for 16 section beams, and section-beam diameter is 36 ins. Yarn ends per section beam are 300 to 400. Yards of yarn per section beam are 24,000 to 38,000. Full and empty section beams are handled with an electric hoist and monorail.

Loom yarn beams are 24 ins. in diameter, and each beam averages 1,200 yds. of slashed yarn. Warps are leased every fourth beam. Beams are lifted by monorail and electric hoist when they are doffed or loaded.

At present, the four slashers are slashing warps for over 1,800 looms; new 50-in. X-2 looms being added at this writing will increase this number because the new looms are not as wide as those removed.

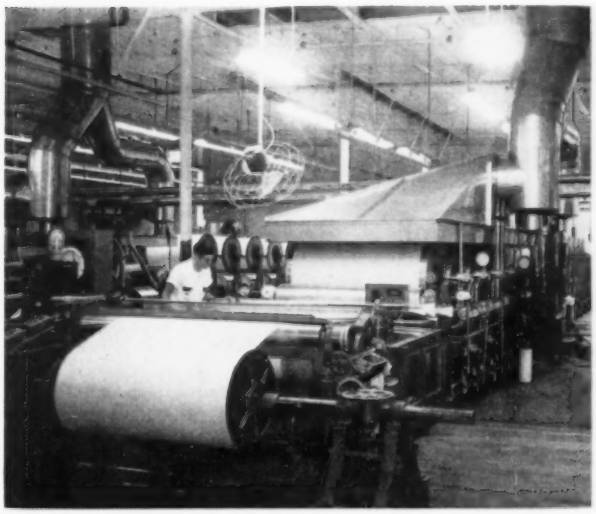
Equipment Has Newest Features

Yarn numbers slashed at Lanett are between 12s and 20s. Fabrics woven are drill, twill, duck, drapery materials, industrial fabrics, and others.

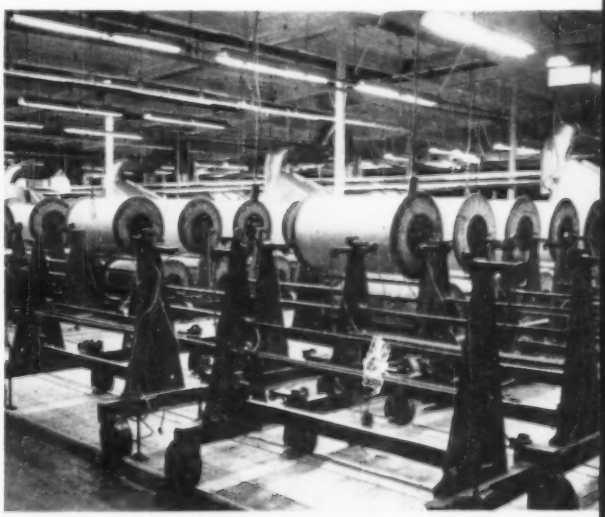
Size content is checked by laboratory desize tests. Moisture content is 7½%; and warp stretch is 1 to 2%.

In all six mills, the slashers have: (1) electric multimotor drives or hydraulic multimotor drives, (2) pneumatic beam compressors, and (3) pneumatic motors for size-box squeeze rolls.

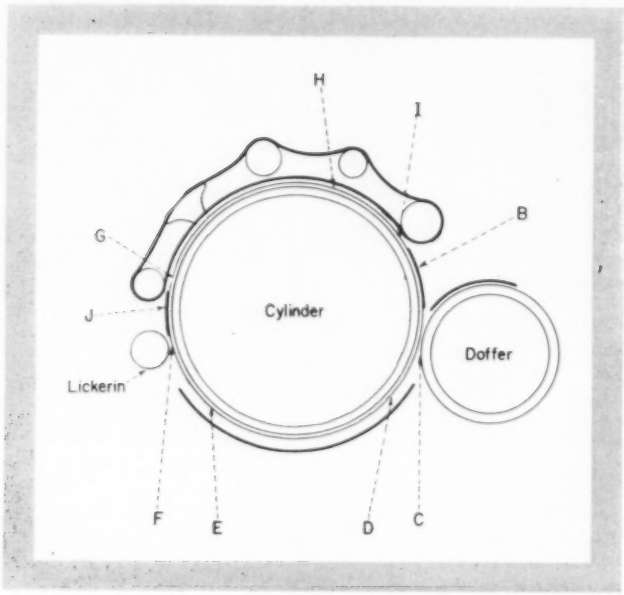
At West Point's Columbus Mfg. Co. mill, the new slashing equipment is much the same as that at Lanett but slashers have traversing headstocks and tailstocks so that both narrow and wide beams can be run on the same slasher without projecting arbors in the aisles.



SLASHERS have either 10 or 12 cylinders; the first four are coated with Teflon. Most recording instruments are in a group by themselves.



MAGAZINE CREEL is loaded while the creel at the slasher is running. Then the full creel replaces the run-out creel.



CARD SETTINGS are changed between the doffer and cylinder at C, between the flats and cylinder at G, H, and I, and between the lickerin and cylinder at F.

How To Make Nubs for NOVELTY YARN

• If you are planning to spin nub yarn and want to make your own nubs, here's how to produce them at the card and work them into the yarn.

By GEORGE B. PEELER, General Manager, Gold-Tex Fabric Corp.

ONE OF THE MOST VERSATILE NOVELTY YARNS being used today is nub yarn, sometimes called noil yarn. This yarn can be made from many combinations of any spinnable fiber.

The yarn-stock background fiber is generally one color, and the nub fiber is a different color. The contrasting colors between the nubs and the yarn fiber cause the novelty effect in the yarn and produce desirable effects in the fabric.

While it is not mandatory to use contrasting colors between the yarn fiber and the nub fiber, best results usually are obtained when contrasting colors are used. This contrast may be had by using predyed nubs or nubs made from fibers that give contrasting colors when the yarn is cross dyed.

Rayon yarn combined with acetate nubs, or vice versa, produces an excellent cross-dye effect. Yarn spun from natural cotton containing a predyed nub gives good effects also. The nub in this instance is usually raw-stock dyed.

Any Plant Can Make Nubs

Plants desiring to make nub yarn can purchase the nubs from a nub manufacturer, or they can make their own nubs. There are a number of different ways of making nubs, and each nub varies according to the process or the machine used. Nubs can be made on any machine that will roll or ball the fiber into small clumps or noils.

Cleaners and pickers can be used to make nubs by stopping the flow of stock from the beater chamber. Use of this equipment is dangerous, however, because a bad choke could tear up the machine and seriously injure the operator.

Another disadvantage of using cleaners and pickers is low production caused by intermittent operation. The machines have to be stopped to remove each batch of nubs.

The safest and most practical method of manufacturing nubs is at the card. Production is continuous,

and the nubs generally are more spinnable and can be controlled more easily in size and firmness.

When this method is used, it is necessary to alter the cards to a certain degree and to change all settings. The coiler head is removed, and a container made of plywood or metal is placed in front of the doffer. The nubs fall into it as the comb removes them from the doffer.

In selecting a card for making nubs, it is advisable to pick the worst card in the plant. The reason is that when a card is used for making nubs, the wire usually is damaged so badly that it is necessary to replace it and completely overhaul the card before it is put back into use for regular work.

Cards Must Be Reset

After the coiler has been removed and the nub container made, it is necessary to reset the card. The diagram shows the points where setting changes are necessary.

Beginning with the front plate, it usually is necessary to make this setting as close as possible without striking the wire of the cylinder. The setting *C* between the doffer and the cylinder should be opened to approximately 0.015 in.

Screen settings at *E* and *D* also should be adjusted. This adjustment usually is a loosening or opening up of the distance between the screen and the cylinder wire. The setting permits the cylinder to load more heavily and causes the fibers to roll or ball up.

The setting *F* between the lickerin and the cylinder has to be adjusted according to the size and firmness of the nub desired.

Lickerin May Load

If this setting is too wide, it may cause the lickerin to load and throw off flakes onto the cylinder from time to time. When the large flakes go in, they change the size and uniformity of the nub being made.

The back plate *J* requires some attention and probably some adjustment in the setting. This setting is determined by the end product and by experimenting until the correct setting is obtained.

Since the rolling or nubbing action of the machine is produced between the flat and the cylinder, it is necessary to give particular attention to settings *G*, *H*, and *I*—the back, middle, and front settings of the flats. These settings to a great extent control the size, shape, and firmness of the nubs. The wider the settings, the larger and firmer the nubs will be.

Back Off the Flats

When the grinder begins to set the flats, a good beginning setting is to back the flats off at all three points 0.005 to 0.006 in. From this setting, it is necessary to experiment by closing or opening settings at each point until the type of nub desired is obtained.

In setting up the card to make nubs, all the bad practices imaginable are used and good carding practices are thrown out the window. The only guide for proper settings is to keep changing them until the right nub is produced. Considerable experimenting on the part of the grinder and the supervisor is necessary.

Settings Depend on Fiber

The type of fiber used to make the nubs has a lot to do with determining the proper settings. For instance, a different setting at some points is used to make acetate nubs as compared with the settings used for rayon-staple nubs. A cotton fiber requires a different setting from a silk fiber. For this reason, settings are discussed here in generalities.

Another thing that affects the type and size of the nub is the amount of stock fed into the card. This stock usually is fed in lap form, and the weight per yard determines the amount of stock going into the machine. If high production is desired, a heavier lap is used.

The speed of the doffer also affects the production, size, and firmness of the nub. The longer the fiber stays in the card, the more rolling or nubbing action it receives.

Blend Nubs With Yarn Stock

After the nubs are manufactured and ready to be processed into yarn, there are a number of ways to blend the nubs with regular stock. The sandwich mix or some mechanical type of blending normally is used.

In most instances, the best nub yarn is made by blending the nubs with the other fiber before the fiber is started through the opening equipment. But if care is not exercised in processing the blended stock through the cleaning and picking equipment, a great percentage of the nubs will be thrown out of the stock before it reaches the spinning frame.

Cleaning action should be reduced, and it usually is necessary to close the grid bars on the pickers to prevent the nubs from coming out at this point. At the cards, good judgment has to be used to find the correct settings needed to produce the type of nub yarn desired.

If the settings are too close, the cards will take out a majority of the nubs and the yarn will not be very nubby. If a yarn with large nubs is desired, the card settings have to be more open.

The least possible amount of action on the stock after it is blended will result in better yarn. Single-process drawing and one-process roving (with single roving in the creel) generally produce good nub yarn. Double roving in the creel often is desirable, however, because it tends to offset weak places in the yarn and make more-even and smoother nub yarn.

Yarn Variety Is Unlimited

A mock-twist nub yarn can be made by running double roving in the creel. One of the rovings should contain nubs that contrast with the nubs in the other roving, and the stock fiber in one roving should contrast with the other when cross dyed if it is not predyed.

The variety of nub yarn that can be made this way is unlimited.

In spinning nub yarn, a short draft at the spinning frame usually gives smoother and better yarn. Long draft tends to cause uneven and thin places behind the numb.

These places tend to weaken the yarn and cause excessive breakage at weaving and warping. The amount of draft used should be determined by the size of the roving and the size of the yarn being spun.

Some travelers cause excessive ends down by catching the nubs. Other travelers cause the nubs to shed out of the yarn. Traveler speed also has an effect on the yarn, and ring size and flange must be considered. The best solution for all these problems is to experiment or consult a good traveler man.

It may be necessary to change the builder and adjust the winding stroke to successfully wind the yarn from the bobbin. If the yarn is being spun on a filling quill, it probably will be necessary to do a lot of adjusting to keep the filling from breaking at the loom. The nubs tend to have a locking action on the yarn as it is spun on the bobbin or quill; and when the yarn is pulled off, excessive breakage may occur.

How Concordia Makes
SAABA TEXTURED YARN

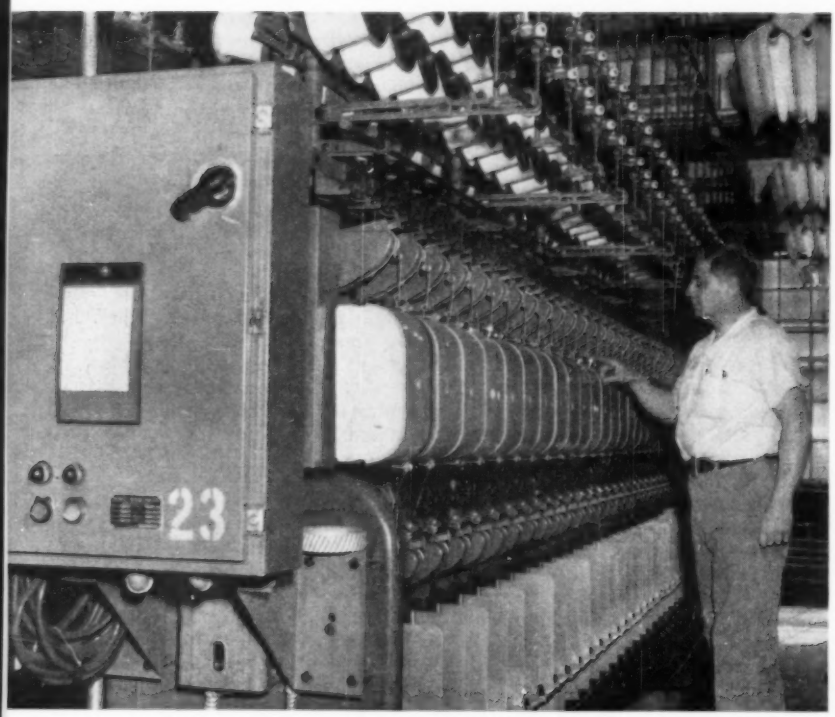
- Saaba, a new textured yarn, is stretch yarn that has been modified to give increased bulk and greater softness to fabrics made from it

- Each operator at Concordia Mfg. Co. is a quality-control assistant who checks the yarn on each package for correct bulk before it passes to the next operation

SAABA YARN is one of the latest additions to the rapidly growing family of textured yarns and is used in sweaters, underwear, swimsuits, curtains, and automobile upholstery. One of the first mills to produce this yarn is Concordia Mfg. Co., Central Falls, R. I. Concordia produces Saaba yarns from nylon, acetate, and Dacron.

Saaba is stretch yarn that has been modified to remove some of the stretch. The yarn is extremely even because it is heated evenly during the modifying process. Yarn evenness, however, can vary because of faulty heater boxes, faulty spindles, and poor-quality stretch yarns; but Concordia guards against accidents by using each operator as a quality-control assistant.

Typical yarns processed are 30-den., 50-den., 70-den., and 140-den. nylon, with 70-den. nylon the most popular. Both natural and solution-dyed yarns are run. Only first-quality nylon is used for Saaba yarns.



MODEL-10 MACHINES are equipped with heater boxes. Feed rolls deliver stretch yarn across the heater boxes at 52 yds. per min.

Stretch Yarn Is Made First

These yarns are processed on Superloft machines directly from the pirns. The Superloft machines convert the nylon into stretch yarn by heating the yarn while it is held in a false-twisted condition with about 75 tpi.

Spindle speed of the Superloft machines is kept down to 30,000 rpm. About 90 hrs. are required to process 1 lb. of stretch yarn on these 100-spindle machines at this speed.

The best twist for each yarn is worked out by knitting test lots of various twists from 50 to 80 tpi. in increments of 2 tpi. Because good stretch yarn is necessary for good Saaba yarns, the heater boxes and spindles are constantly checked.

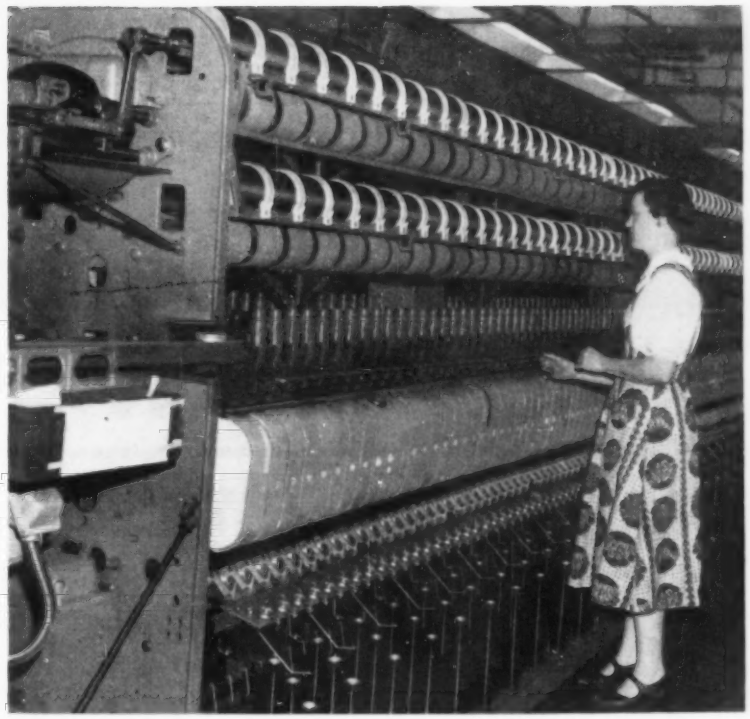
Colored strips of adhesive tape are placed at the ends of each section of the heater boxes to rapidly distinguish the 18 spindles in the section if the temperature control fails. If the temperature varies 10° F. from standard, all spindles in the section are disengaged immediately until the control is rectified.

Temperatures Are Controlled

Temperatures for natural 70-den. yarns are controlled at 440° F. Black solution-dyed yarns are processed at 410° F.

After false twisting, the yarn is taken up on anodized spools that have colored ends to easily distinguish the direction of yarn twist and the yarn type.

Half the yarn is twisted S direction



←STRETCH YARN processed on Superloft machines is the first stage in making Saaba yarns. Black solution-dyed nylon is treated at 410° F.

SAABA YARN is checked for correct twist by the operator as it is doffed. Each package holds 2¼ lbs. of yarn. Creeling and doffing are done each morning.

and the other half is twisted Z direction. Yarn on every spool is checked by the operator before it goes to the next operation.

The operator pulls a few feet of yarn from the spool, stretches it, and lets the yarn relax. She checks for correct twist, evenness, and strength.

How Machines Are Converted

If the yarn is found suitable, it is sent to the Model-10 twisters that have been converted to make Saaba yarns. The conversion includes heater boxes for each spindle and feed rolls that pass the yarn over the heater boxes.

Caps are placed over the ends of the bobbins of stretch yarn to assure better running. One end of S-twist yarn and one end of Z-twist yarn are creeled above each spindle of the converted Model-10 machine.

These two yarns pass through feed rolls to the heater boxes. The Z-twist yarn is run through the left groove in the heater box, and the S-twist yarn is run through the right groove.

After the yarn has passed over the heater boxes, it is run four times around a take-up wheel and the two yarns are twisted together on a large twister bobbin. The yarn overfeed is about 6.3%, and the temperature of the heater boxes is closely controlled at 440° F. for 70-den. yarns. The speed of the yarn over the boxes is kept constant at about 52 yds. per min.

The converted Model-10 machines have 100 spindles each with 5-in. rings. The spindle speed is 5,400 rpm. to put 2.9 tpi. in the finished yarn.

Creeling of the stretch-yarn bobbins and doffing of the Saaba yarn is done each morning. All the stretch yarn from the iron-head bobbins is completely run off on the twister bobbins, which hold 2¼ lbs. each when full.

Every spindle is checked each morning with a stroboscope to make sure that the spindle speeds are constant. Each bobbin of yarn is checked by the operator as it is removed from the frame. About 1 yd. of yarn is pulled from the bobbin and examined for stretch, strength, and fuzziness.

The yarn is also inspected by the winder as she creels each bobbin on the No. 50 winding machine. A special operator handles Saaba yarns, and she checks especially for broken filaments.

Yarn Is Lubricated

About 1% lubricating oil is put on the yarn during winding. All the yarn from one twister bobbin is wound on one cone.

Tension is started at five to six grams on each lot of yarn. A meter is used to check this tension at the start of each new lot.

A final inspection before packing includes a check for stretch and correct bulking. Each cone is then wrapped in waxed paper and packed in nesting cartons for shipping.

TENSIONS are carefully controlled in winding. The starting tension is adjusted at five to six grams and is tested at the start of each lot.

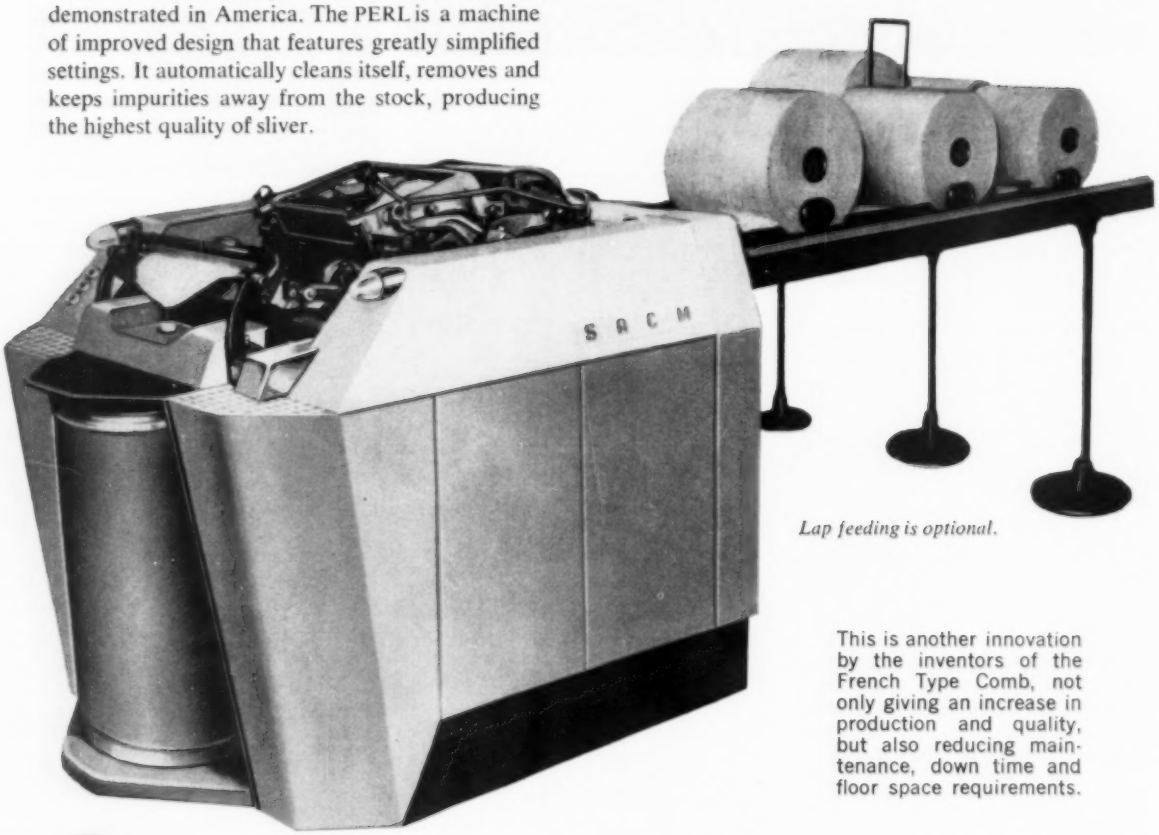
SACM ANNOUNCES THE NEW

PERL WORSTED SYNTHETIC COMB

50% MORE PRODUCTION

175 NIPS PER MINUTE

A dramatically faster, minimum floor space, vibrationless worsted and synthetic comb will soon be demonstrated in America. The PERL is a machine of improved design that features greatly simplified settings. It automatically cleans itself, removes and keeps impurities away from the stock, producing the highest quality of sliver.



Lap feeding is optional.

This is another innovation by the inventors of the French Type Comb, not only giving an increase in production and quality, but also reducing maintenance, down time and floor space requirements.

SOCIETE ALSACIENNE
DE CONSTRUCTIONS MECANIQUES
MULHOUSE, FRANCE

ATKINSON, HASERICK & CO., INC.
Engineers & Agents for the World's Leading Textile Machinery
FRAMINGHAM, MASS.
336 Ridgewood Ave., Charlotte, N. C.
Greenville, S. C.—Philadelphia, Pa.

For more data, circle A-28 on Reader Service Card

How You Can Save on
ELECTRIC-POWER BILLS

The adage of power companies, "The more you use, the less it costs," is true if you control your power constantly: a constant high load is often more economical than intermittent high and low loads. Here's how you can—

- **Get the best power deal at your plant**
- **Select your proper rate from several rates**
- **Know that your plant is on the best rate**

INDUSTRIAL POWER RATES usually contain two forms of charges: (1) demand charge and (2) energy charge. The demand charge covers, at least in good part, the fixed charges of the power-company investment and the overhead expense of the business.

The energy charge is related primarily to operating expenses, some of which, such as fuel, vary with the quantities of electricity used by the customer.

The demand charge is usually applied to the customer's greatest use of service in a given period. It's usually a 15- or 30-min. period, but it's sometimes a 60-min. interval. Demand meters that record the customer's use in terms of kilowatts during such a set interval determine the customer's maximum demand in the month; then the demand charge is applied.

More Power Often Costs Less

The energy charge is applied to the quantity of service used by the customer throughout the month, and meters register this quantity of service used in terms of kilowatt hours.

The two sets of charges, demand and energy, are made on the principle that the greater the use of service by the customer, the lower the unit costs are for the utility. Therefore, as a rule, both the demand and energy charges are blocked to provide decreasing unit prices for greater use of service. For this reason, the common phrase is used, "The more you use, the less it costs."

Based on a paper given by L. G. Cannon, Commonwealth Edison Co., at the Ninth National Plant Engineering and Maintenance Show and Conference in Chicago.

Your best rate can be determined easily; your power company will help you decide the best rate for your plant. It will prepare a comparative analysis of billing your plant's present uses and proposed uses of service under all available rates.

The power company will also call your attention to any of the provisions of the rates that will bear upon your making the most economical possible use of your electric service. The actual rate selection is left to you, but you have expert guidance in making your selection. And there is no cost for this service.

Rate Is Based on Two Charges

Once you select the rate for your plant, you must then make the rate work best for the lowest possible over-all service cost per kilowatt hour. Remember that the rate is a combination of demand and energy charges; then the trick is to (1) establish a demand for electric service that is no greater than is absolutely necessary and (2) use the established demand as constantly as possible throughout the 30-day billing period.

The ratio between these two combinations is your load factor. Therefore the higher the load factor of your plant's use of service, the lower the average cost per kilowatt hour. For example, a plant that operates three full shifts seven days a week earns a lower rate per kilowatt hour than a plant that operates only one shift five days a week.

But even in plants with only one or two shifts, there are ways to improve the load factor and thus reduce power costs. Studies will show the possibilities of staggering the operations of large power-consuming equipment to reduce your over-all demand.

Instruments Show Your Peak Load

For such studies, you can obtain graphic-demand meters to determine the coincidence of the uses of electric service by the large power-consuming equipment with the total plant demand both before and after changing the equipment schedules.

In some instances, the studies show that control of a plant's demand can be accomplished with instruments that interrupt the supply of power to certain equipment whenever the plant's demand reaches a predetermined level. In other instances, operations can be changed to other shifts.

Of course any changes in operations to reduce power cost must be weighed against adverse cost results such as reduced production and increased labor cost.

Power factor is another condition that affects your electric-power bill. Power factor is the ratio of the power that is metered to the total power supplied; the difference between the two kinds of power is the wattless or reactive current that certain types of electric equipment require.

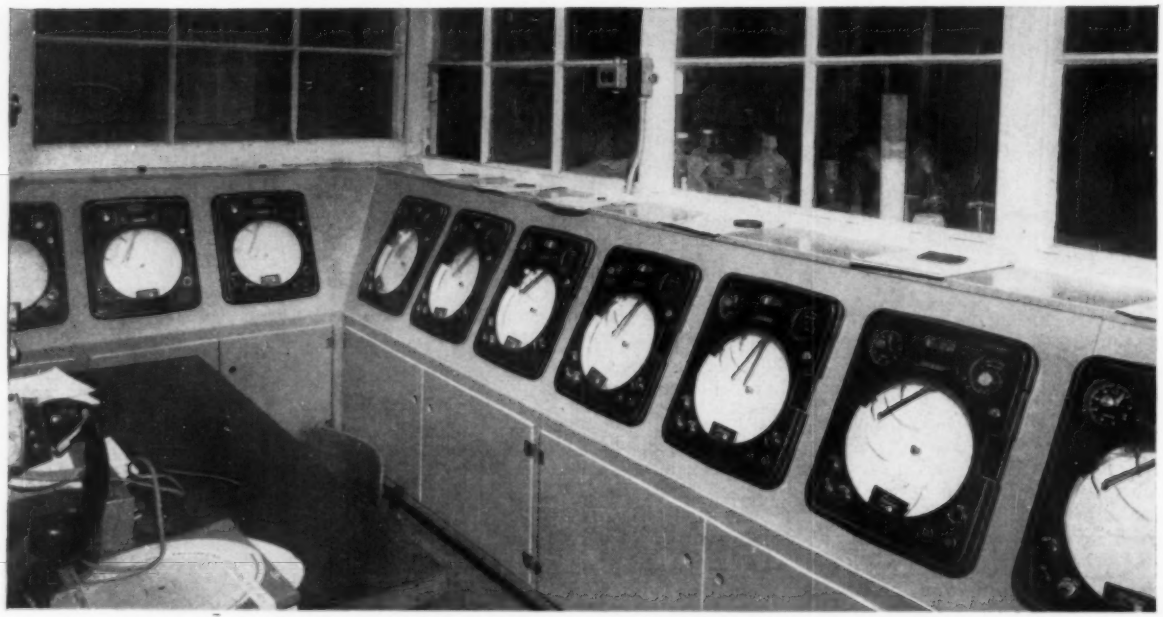
Low Power Factor Is Costly

Some utility rates require additional charges if the customer's power factor is below a base level of, say, 80 or 85%. Sometimes there's a reduction in charges if the power factor is above the base level. Low power factor is costly to any plant, not only because of the high rate but because it requires greater wiring and switchboard capacity than for high power factor.

Methods and equipment for power-factor improvement are readily available and easily applied. First you must determine which equipment causes

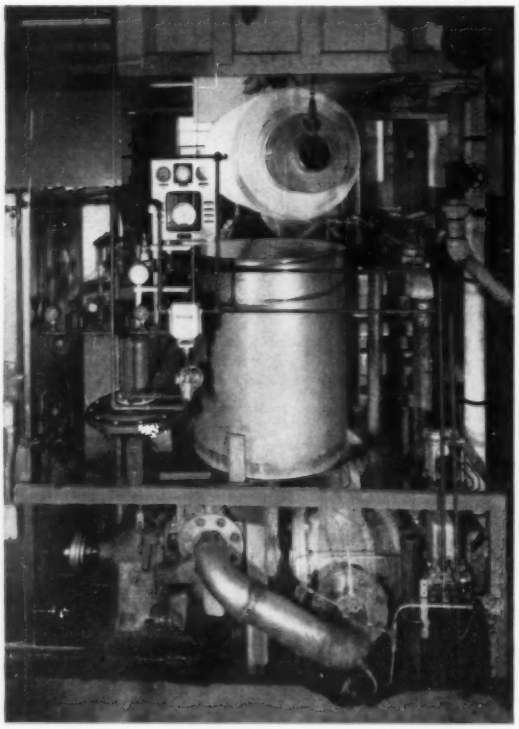
CONTINUED ON PAGE 154

Progressive Mills Depend on



Foxboro Remote CycleLog* Controllers regulate temperature schedules in knit goods dyeing operation at William Carter Co., Barnesville, Ga. From this centralized location, dyer and assistant easily handle more than 15 complicated time-temperature schedules simultaneously.

*Reg. U.S. Pat. Off.



Foxboro At-The-Machine System for complete control of high temperature dyeing machine. Proper temperature schedules, flow and flow reversal rates are assured in synthetic cloth dyeing at Kenyon Piece Dye Works, Kenyon, R. I.

Foxboro Cabinet Control Systems. Shown here are 4 of 15 identical control systems regulating dyeing schedules in different makes of package dyeing machines at a large southern mill.

For more data, circle A-29 on Reader Service Card

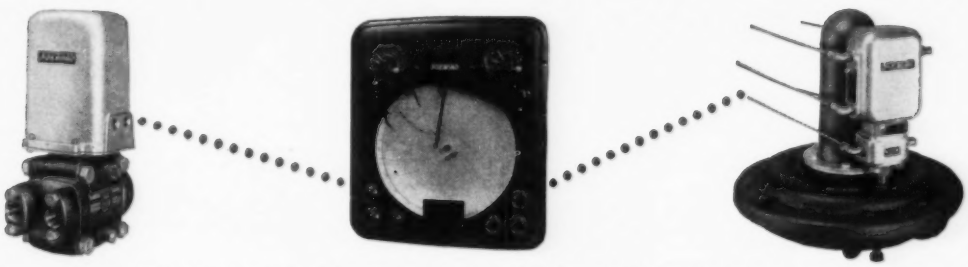
COMPLETE Dye Control Systems

...engineered by Foxboro

More and more modern mills are finding that consistent uniformity is assured economically in *any* dyeing operation with a Foxboro-Engineered Control System. These advanced instrument systems are *complete* . . . perfectly matched to the machines they control. They're available for every type of dyeing: raw stock, yarn, synthetics, and others. There's no guesswork. Every step in the most complicated flow or temperature schedule can be precisely reproduced by simple knob settings, giving you uniform results, every time. The installations shown here, are typical of hundreds of Foxboro Engineered Cabinet Control Systems. Depend on them for *better* control of every dyeing operation in your mill.

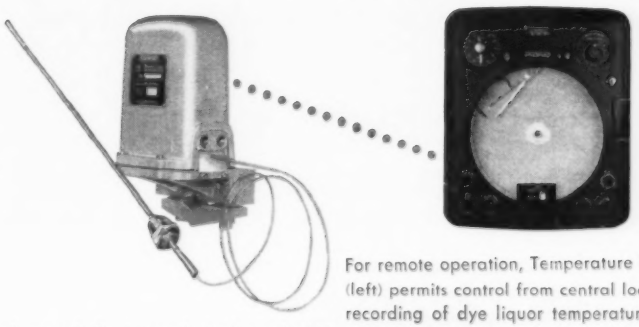
Write for Data Sheets on Control for your type of dyeing operation. **The Foxboro Company, 8411 Neponset Ave., Foxboro, Mass., U.S.A.**

FOR AUTOMATIC CONTROL OF FLOW AND PRESSURE...



By combining flow and flow reversal control with overriding pressure control, a Foxboro system gives the precise flow required by the dyer, plus positive protection for beams, to prevent blowing. Type 13A d/p Cell Flow Transmitter (left), measures dye liquor flow, and transmits it to Timer-Set Control Station (center), where actual flow rates are recorded. Operator merely sets desired rates... control action maintains exact rate and reverses flow automatically. Control setting is transmitted to valve-mounted Model 59 Flow Controller (right).

FOR AUTOMATIC CONTROL OF TEMPERATURE CYCLES...



For remote operation, Temperature Transmitter (left) permits control from central location, and recording of dye liquor temperature on same chart with flow record. Foxboro CycleLog (right), the camless, time-schedule controller, fills all normal dyeing requirements. Each step of individual schedules set by simple adjustments of knobs... CycleLog automatically carries out entire dyeing schedule.

FOXBORO
REG. U.S. PAT OFF

INSTRUMENTATION FOR TEXTILE PROCESS CONTROL

BESIDE YOURSELF over needle problems? You needn't be —when you can get top-quality needles for knitting, sewing, felting or tufting from . . .

THE TORRINGTON COMPANY

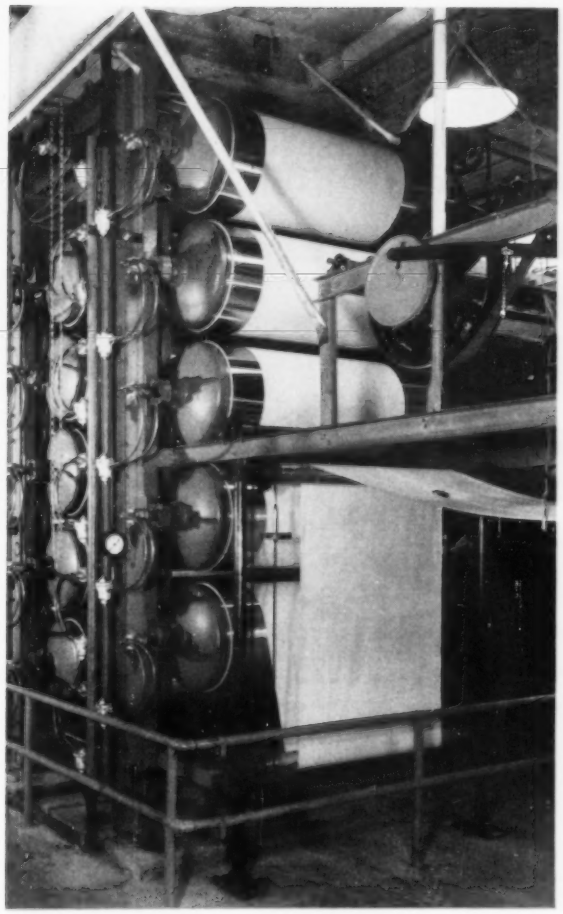
Needle Makers Since 1866

Torrington, Conn., U.S.A. • Bedford, P.Q., Canada • Coventry, England

Branches to serve you are located in: New York • Philadelphia • Chicago • Boston • Greensboro, N. C. Atlanta • St. Louis • Toronto, Ont., Canada • Broadgate House, 7-10 Eldon St., London E.C. 2, England Pacific Coast Representative: E. G. Paules, 1762 West Vernon Ave., Los Angeles 62, California

For more data, circle A-30 on Reader Service Card

How Stainless Steel Cloth Drying Cylinders Help Save Fuel



Fabrics stay spotless in this system of cloth drying cylinders made from Armco Stainless Steel. The system is at the Renfrew Bleachery, Travelers Rest, S. C.

Cloth drying cylinders made of Armco Stainless Steel conduct just enough heat to do an efficient drying job. They don't waste heat. You don't waste fuel.

Cloth stays clean, too, because stainless cylinders resist rust and discoloration—are easy to keep bright and free of dirt. What's more, the strength of Armco Stainless Steel provides extra resistance to high pressures, and its hard surface guards against denting and scratching.

Armco Stainless Steels are widely used in many kinds of textile processing equipment because of their uniformly high quality. Grades are available for practically every purpose, in sheet, strip, plate, bar and wire.

For more information about uses of Armco Stainless Steel in the textile industry, fill in and mail the coupon. Send it, too, for the name of your nearest distributor of Armco Stainless Steels.

Other Armco Steels for top-quality textile equipment include ALUMINIZED STEEL, ZINCGRIP®, and ZINCGRIP PAINTGRIP®.

New steels are born at Armco

ARMCO STEEL CORPORATION, 2928 Curtis St., Middletown, Ohio

☐ Please send the Armco folder, **"Stainless Steel and Textiles"**

☐ Send me the name of my nearest Armco Stainless Distributor

NAME _____ TITLE _____

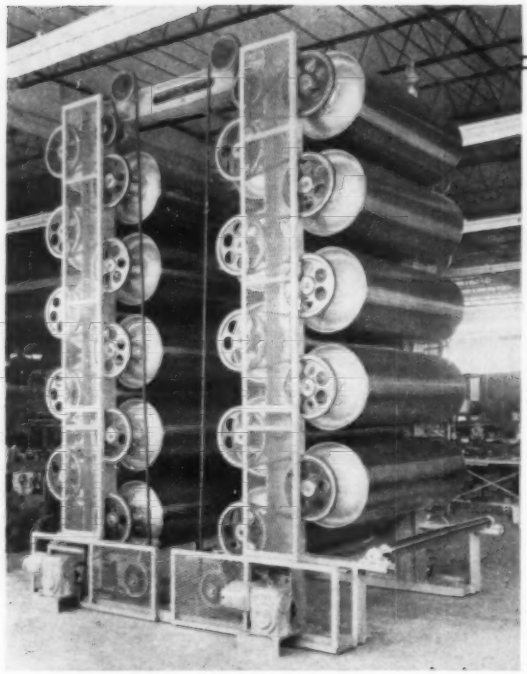
FIRM _____

STREET _____

CITY _____ ZONE _____ STATE _____

ARMCO STEEL

Armco Division • Sheffield Division • The National Supply Company • Armco Drainage & Metal Products, Inc. • The Armco International Corporation • Union Wire Rope Corporation • Southwest Steel Products



All parts are completely erected and tested in our shop before dismantling for shipment.

Cocker
Cloth Ranges

Low Initial Investment

Low Maintenance

Streamlined production in Cocker's new and modern plant has resulted in attractive prices for this fine equipment.

Cocker engineering has produced a more rugged machine to give longer trouble-free service, and has added features which improve operation.

Journals have been greatly improved, with 60,000 lbs. tensile strength instead of the usual 35,000. Seals and bearings are assembled in a single self-aligning unit to provide a leakproof seal.

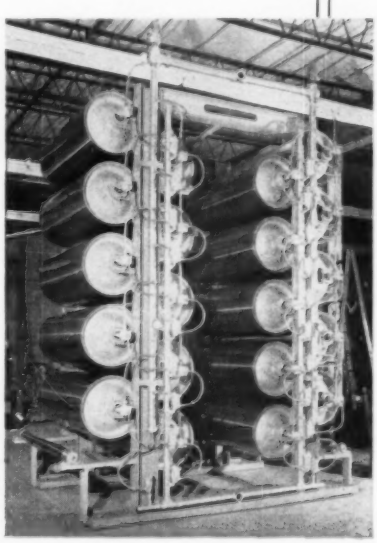
Drums can be either 23" or 30" with faces up to 144", and are ASME Coded for 69 PSI. Accurately matched cylinders assure a total runout not to exceed .045.

V-Belt Drive with automatic belt tighteners require practically no maintenance and run smoothly and quietly.

Drums can be heated from one or both sides, using either rigid or flexible tubing for steam and condensate return.

Base columns and cross members are of rigid construction to permit accurate alignment of all members.

Cocker will engineer these fine cloth drying ranges to fit your exact requirements. Write today for free consultation.



In Canada and New England:
Contact W. S. Clark, Montreal, Canada
Melrose 1-3751

Plant and Offices at Ranlo, N. C. (Mailing address, Gastonia, N. C.)

THE LEADER — COCKER — AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

For more data, circle A-32 on Reader Service Card

For more data, circle A-33 on Reader Service Card→

...combine economy with low cost!

There is a vast difference between economy and low cost.

Sonoco double-head spools are made to give you both, but their economy in the long run far exceeds any cost advantage at the start. That is because all Sonoco spools are engineered for the job *first* and then produced at the lowest cost possible.

If your job requirements can be met with Sonoco standard spools, you have a wide range of sizes and types to choose from. If you require a custom made spool, Sonoco can design and produce one to your specifications. If a low cost paper spool can do the job, Sonoco can make it. Both standard and custom spools are produced under quality controlled conditions from raw material to finished product, guaranteeing uniformity and production economy in use.

Widely used for packaging: tape . . . braid . . . fringe . . . thread . . yarn . . . wire . . . rope . . . binding . . . gimp . . . etc.

For quotations, send sample or specify length of traverse, head, bore and barrel diameters.

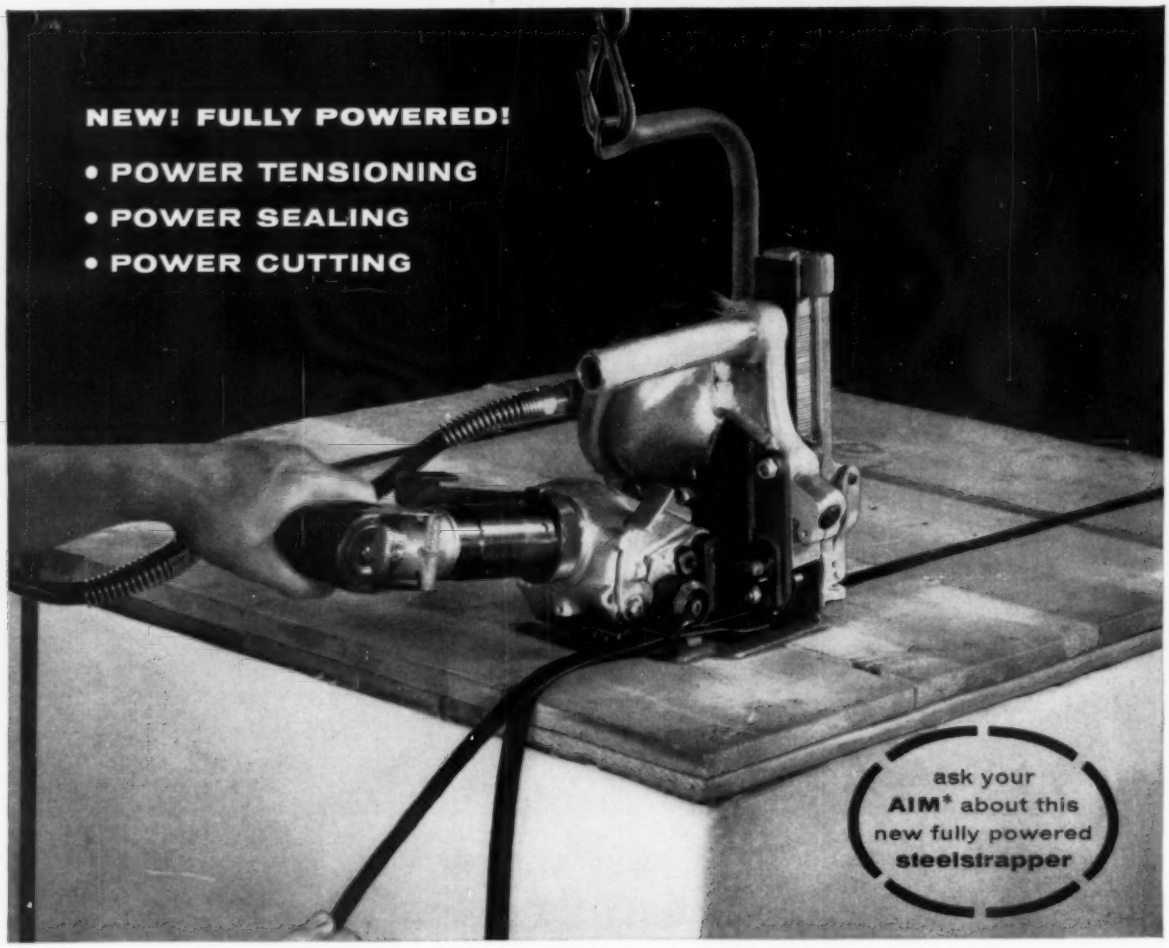
SONOCO

Products for Textiles

SONOCO PRODUCTS COMPANY

Main Office - HARTSVILLE, S. C. • MYSTIC, CONN. • AKRON, IND. • LOWELL, MASS. • PHILLIPSBURG, N. J. • LONGVIEW, TEXAS • PHILADELPHIA, PA. • LA PUENTE, CAL. • ATLANTA, GA. • GRANBY, QUEBEC • BRANTFORD, ONTARIO • MEXICO, D. F.

1745


NEW! FULLY POWERED!
• POWER TENSIONING
• POWER SEALING
• POWER CUTTING
ask your AIM* about this new fully powered steelstrapper

Announcing another Acme Steel first...

The new, fully powered A4 Steelstrapper

ACME STEEL COMPANY is first to offer industry a Steelstrapper that tensions, seals and cuts steel strapping automatically . . . all with air power. Called the A4 Pneumatic Steelstrapper, this new tool includes one-hand controls among its many features.

With steel strapping quickly and easily inserted, the operator merely presses a control on the handle to power-tighten strapping to predetermined tension. And then with another power control on the same handle, magazine-fed seals are applied and the steel strapping cut without waste or operator effort.

Your *Acme Idea Man can demonstrate the new A4 Pneumatic Steelstrapper and show you its many time, effort and money saving advantages. The first full-power tool of its kind, the new A4 Steelstrapper will give maximum performance in your steel strapping application.

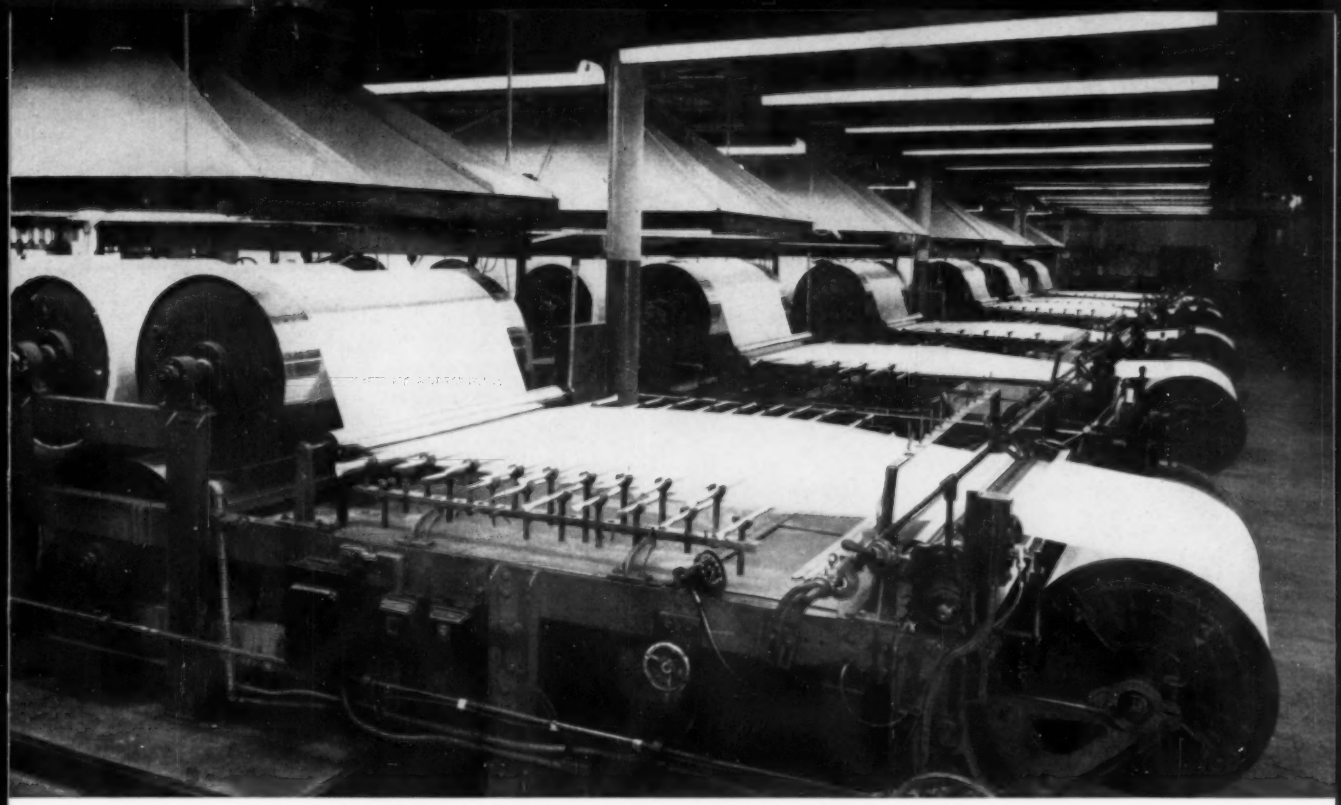
Ask your Acme Idea Man, or write, for your free brochure detailing the features of the new fully powered A4 Steelstrapper.

Contact your Acme Idea Man at the nearest Acme Steel Company office. Or write: Dept. TAS-118, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois. In Canada, Acme Steel Company of Canada, Ltd., 743 Warden Ave., Toronto 13, Ontario.

ACME STEEL **STEEL STRAPPING**

For more data, circle A-34 on Reader Service Card

For more data, circle A-35 on Reader Service Card →



This battery of Kidde-Johnson Slashers is in operation at a leading southern mill.

Versatile Kidde-Johnson Warp Sizer HANDLES ALL YARNS

The all-purpose, high speed Kidde-Johnson Slasher is versatile because . . .

. . . it will slash yarns of any fiber – filaments or spuns – from the finest count for delicate fabrics to the heaviest denier tire cord.

. . . its production capacity can be expanded to meet future needs . . . drying cylinders, single or combination quetsches can be added, head ends extended and/or widened.

. . . it is constructed to fit your requirements . . . for silk system slashing (single beam to loom beam), cotton system (from several section beams to loom beam) or both.

Here are some other outstanding features . . .

1. A smooth all electric drive in single or multi-motor arrangement.
2. Loom beam rigidly supported in ball bearings close to beam flange. Will easily accommodate various width loom beams.
3. Size level, size temperature, and cylinder temperatures are precisely controlled individually or in groups.
4. Application and impregnation of size by pneumatically loaded quetsch rolls is uniform throughout the run.
5. Fingertip calibration of stretch with a stretch indicator that gives continuous indication.
6. Stainless steel lead-in and idler rolls, solution pan, botton quetsch roll, cylinders, and split rods.
7. "Teflon" coated cylinders to immunize against sticking. Also moisture content controls, viscometers, etc.

For full information on modernization of your present slashing equipment or on complete new slasher installations, call PILGRIM 8-8100 or write . . .

TRICOT AND RASCHEL MACHINES • TRICOT WARPERS • HORIZONTAL WARPERS • BEAMERS
CREELS • SLASHERS • WINDER-REDRAWS • TENSOMETERS • TENSION COMPENSATORS

Kidde

TEXTILE MACHINERY CORPORATION — BLOOMFIELD, NEW JERSEY

The word KIDDE is the trademark of Walter Kidde & Company, Inc., and its affiliated companies.

See how you save with the "SCOTCH" Brand

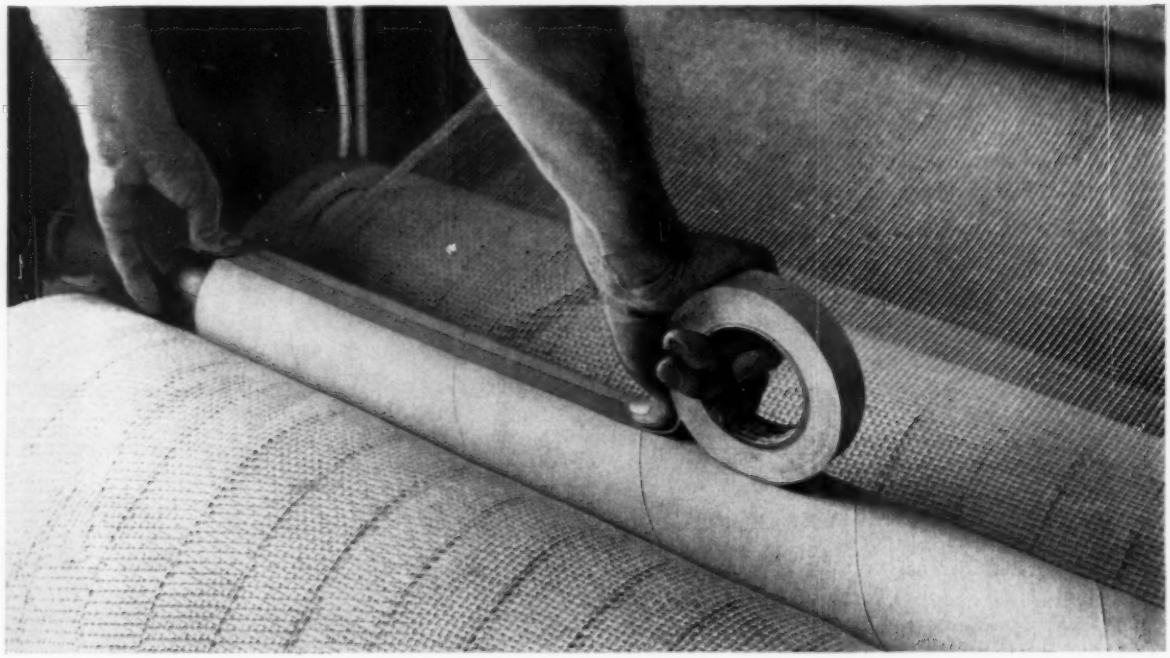
Tape that sticks on both sides

Quick, sure way to start a wind of cloth on the roll: place a strip of "SCOTCH" Brand Double-Coated Tape lengthwise or around the empty tube . . . press end of cloth against the tape . . . the wind is started! "SCOTCH" Brand Double-Coated Tapes give you *two* sides of the strongest adhesive on any double-coated pressure-sensitive tape. They make a quick, sure, and *mess-proof* way to handle dozens of holding, fastening, and splicing jobs in a textile mill.

And this is only one of the more than 300 tapes in the "SCOTCH" Brand line. Among others are tapes as strong as steel . . . tapes in a rainbow of colors . . . tapes that can be printed on . . . tapes that resist acids, alkalies, and solvents. Together, "SCOTCH" Brand Tapes make up the world's most complete line of pressure-sensitive tapes for textile mill use. That's why you get the *right* tape for every need when you specify "SCOTCH" Brand.

For complete information, including facts on "3M-MATIC" taping and dispensing methods, send for free illustrated booklet, " 'SCOTCH' Brand Tapes for the Textile Industry." Write: 3M Co., 900 Bush Ave., St. Paul 6, Minn., Dept. PZ-48.

"SCOTCH" is a registered trademark of 3M Co., St. Paul 6, Minn.



When tape costs so little, why take less than

REG. U.S. PAT. OFF.
SCOTCH BRAND **Tapes for the textile and apparel industries**

MINNESOTA MINING AND MANUFACTURING COMPANY
. . . WHERE RESEARCH IS THE KEY TO TOMORROW

3M COMPANY

For more data, circle A-36 on Reader Service Card

For more data, circle A-37 on Reader Service Card→

A NEW CONCEPT IN DYESTUFFS

REMAZOL®

FIBER-REACTIVE DYES

- Brilliant shades
- Excellent fastness properties
- Shorter rinsing time
- Simple application

REMAZOLS present a unique system of fiber-reactive dyes that makes color part of the very nature of fibers.

developed and patented by
FARBWERKE HOECHST AG.
Frankfurt, West Germany

manufactured by
HOECHST CHEMICAL CORP.
West Warwick, R. I.

CARBIC COLOR & CHEMICAL CO., INC.
451 WASHINGTON STREET, NEW YORK 13, N. Y.
CHARLOTTE • PROVIDENCE • PHILADELPHIA • COLUMBUS • LOS ANGELES • HAMILTON, ONTARIO

HOECHST

(*Advertisement*)

WHAT YOU SHOULD KNOW ABOUT STARCH*

Size Preparation

IN TEXTILE MILLS

It has been stated that correctly or incorrectly prepared warp sizing can decrease or increase weaving costs as much as 25%. A statement of this nature may or may not be conjectural. However, it is well established that a properly sized warp increases production and reduces seconds resulting in lower cost per unit of finished cloth.

There are three important ingredients required in the preparation of a quality size. All are of equal importance. These are: (1) a uniform supply of refined starch, compound, and softener, (2) properly designed cooking, storage, and handling equipment, with adequate controls and, (3) a conscientious size maker. These three ingredients are available.

The purpose of cooking is to break down the starch granule (liberating the soluble part, beta amylose) which will provide a homogenous solution with definite viscosity characteristics. A cooked starch imparts viscosity or thickens the mix causing the solution to be adhesive, as well as cohesive, i.e., it will stick to substances as well as stick to itself. This characteristic provides the starch the ability to form a tough, continuous film, which, when dried, adheres to the yarn providing protection in the weaving operations.

A cooked starch imparts a definite viscosity to its solution depending upon temperature time, and quantity of starch solids in the mix. Hence, viscosity measurement provides a check on cooking operations. Mechanical agitation or shearing action on the starch granule will also liberate the soluble portion. Because of this action, homogenizers are used in size preparation as well as equipment designed to force the granules through small orifices under pressure and temperature. Certain types of enzymes will aid in making the starch soluble.

Once the exact size formula and cooking procedure has been established, the object becomes the preparation of a uniform size from batch to batch. The size should have a uniform viscosity free of foreign matter, uncooked starch or congealed size.

Before starting preparation of a size batch, the cooking kettle should be thoroughly washed out to remove any size from a previous batch. A predetermined amount of cold water is measured into the kettle by meter or gauge stick. By experience, the amount of cold water can be adjusted to provide the exact gallons of finished size desired at the end of the cook. This can be accomplished if the source of steam is clean (dry), steam lines well insulated, and condensation traps in good condition. The addition of water at the end of the cook should be avoided if possible. If it is necessary to add water, it should be hot—never cold. Cold water will cause congealing. No amount of cooking will redissolve this gel once it is formed.

A weighed amount of starch is added to the cold water with agitators running. The slurry is stirred cold 10-15 minutes to thoroughly wet out all starch granules. The addition of starch to warm or hot water causes lumping. Once these lumps are formed they are difficult to disperse endangering the quality of the size.

If an enzyme thinner is used, it is added next and time allowed for its action to be complete following the directions of the manufacturer.

After agitating of the cold slurry and close inspection shows complete starch dispersion (no lumps), the cooking cycle is turned on allowing steam to enter the coil. Heating should be uniform with the boiling point reached 15-20 minutes after heat is applied.

During the boiling cycle it is good practice for the size maker to periodically observe the action in the kettle. This is merely to check on temperature and steam controls. Constant boiling should be noted by the bubbling action of the steam up through the size. It is good practice to add softeners and waxes to the kettle as late as possible in the cooking operation. Oils, fats, and waxes inhibit the opening of starch granules by forming an insulating layer around the granules. A microscopic examination of a size cooked with the compounds added with the starch will demonstrate this phenomenon. Uncooked granules surrounded by an oily layer will be seen even though the size has been cooked at boiling temperature and homogenized under several hundred pounds pressure. The addition of solid compounds to a boiling starch mixture presents a problem because of the danger of splashing hot size on the operator. However, cooking kettles of sufficient size to allow at least 12-18 inches outage above finished size level will greatly assist in alleviating this danger.

Where homogenizers are used in size preparation it is recommended that the starch be held at boiling temperature for 30 minutes before pumping to the homogenizer. Less cooking time enhances possibility of unopened starch granules and viscosity variations.

After the size has been cooked for the proper time, the steam is shut off, agitators stopped, and the size level measured. On large batches of 200 gallons or more, if the level is within one inch of formula requirements, no additional water should be added. On smaller batches the finished level should be within one-half inch. Add hot water only with agitators running. If level finishes higher than formula allows, steam, steam lines, and traps should be checked.

Viscosities of the prepared size batches should be checked at regular intervals. There are various viscosity instruments available which can be used in the slasher room for control measurements by the size maker or overseer.

These Are Some Of The OK BRAND Products Especially Engineered To Meet Specific Textile Mill Requirements

OK–Hubfilm

OK–Hubcolor

OK–Waxyfilm

OK–Printex

OK–Keotac (cationic)

* ONE OF A SERIES OF ARTICLES, FOR THE COMPLETE SET AND FOR OUR CONTINUING TECHNICAL DATA SERVICE, WRITE WITHOUT OBLIGATION TO:

The Hubinger Company

HUBINGER 78 YEARS

601 Main Street
KEOKUK, IOWA

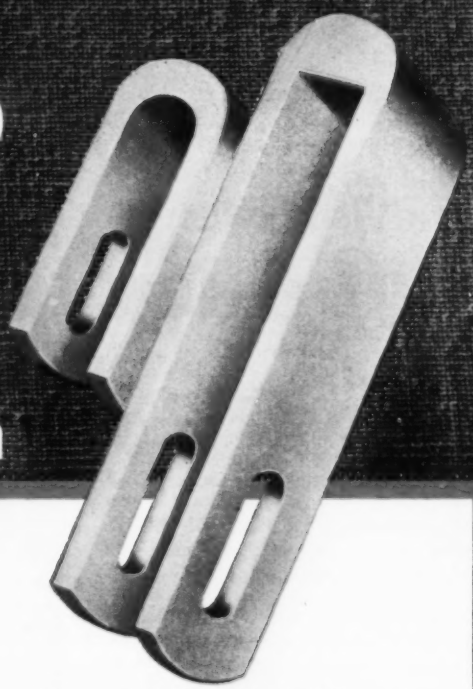
Sales Representatives: IRA L. GRIFFIN AND SONS • Charlotte, N.C.

For more data, circle A-38 on Reader Service Card

For more data, circle A-39 on Reader Service Card→

Why this lug strap lasts longer...

insures smoother operation



Because of the great strength of Tex-Hide—a product of Gates *specialized* research—the block can be molded into the strap without the use of bolts or rivets. As a result, straps are streamlined and light in weight.

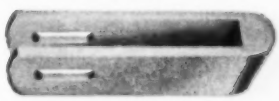
Yet, because of their superb resilience, they will give you longer service, and smoother operation, *than any other strap you have ever used.*

2 big advantages of Gates Tex-Hide Lug Straps

1. Tex-Hide Lug Straps combine great strength with unsurpassed resiliency. Therefore, they soak up blows and shocks *without taking any permanent stretch.*

2. The great resiliency also insures long life for *all parts* of the picking motion, and gives extended periods of operation *without any strap adjustments.*

Super Tex-Hide Lug Straps



Users report up to 5 times longer service on their heaviest looms from Super Tex-Hide than from any other strap.

New Thin-Tex Lug Straps

When extreme flexibility and much lighter weight are needed, Thin-Tex Lug Straps give up to 25% longer life than ordinary straps...and smooth out loom operation.

Gates Distributors are in the Yellow Pages

Gates

The Gates Rubber Company, Denver, Colorado

The Mark of *Specialized* Research

Other Products...

- Take-up Roll Coverings
- Card Bands
- Cone and Evener Belts
- Spinning Frame Drives

Tex-Hide Harness Straps

Tex-Hide and Vulco Loop Pickers

Reversible Pickers

TPA 325

Gates Lug Straps

Better dyeing

by **INTERNATIONAL SALT COMPANY, INC.**

How to Save 5-10% on Dyes ...Get Better Colors, Too

You can do it by using new Sterling TNA-5 Reagent in place of ordinary salt in neutral and alkaline dye baths. This remarkable reagent can cut as much as $375 from a monthly dye expenditure of $5,000 by making dyes "work harder." Compared with ordinary salt, Sterling TNA-5 forces *more* dyestuff out of solution and onto the fabrics being dyed. Thus, 5-10% less dyestuff is needed! Annual savings on dyestuff alone can amount to *thousands of dollars!*

Product quality, furthermore, is greatly improved. Finished fabrics are softer, smoother, richer in color, evenly dyed throughout. This is because TNA-5 is free of any calcium or magnesium impurities that can cause product harshness, "salt streaks," or uneven colors. Sterling TNA-5 is composed of fine, white, granular anhydrous crystals . . . and is classified as a chemically pure dyeing reagent. TNA-5 also has these additional advantages:

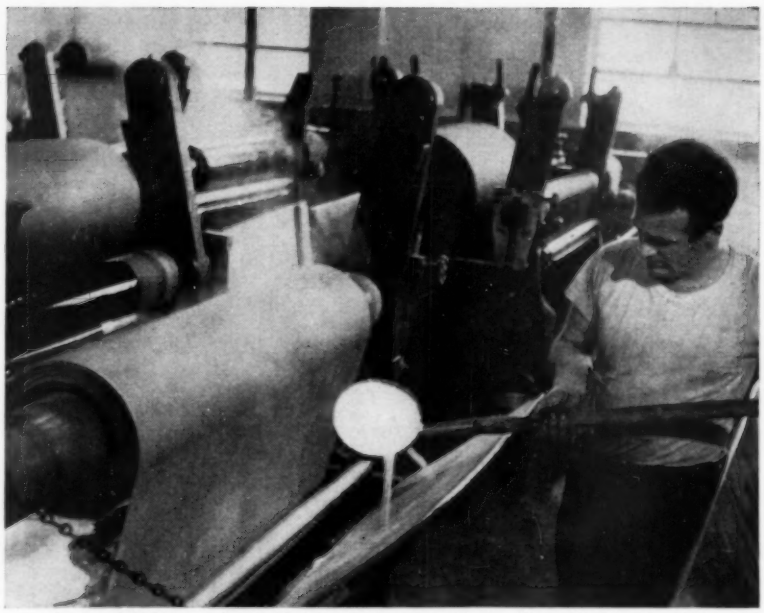
1. Costs less than Glauber's Salt. Sterling TNA-5, the purest dyeing reagent available today, actually costs *50% to 65% less* than Glauber's Salt (anhydrous sodium sulfate). Yet TNA-5 replaces Glauber's Salt on a pound-for-pound basis . . . and has an equally good exhaustion rate.

2. Extremely versatile. You can use Sterling TNA-5 in a neutral or alkaline dye bath to dye cotton, rayon, or any blend of these fibers with wool. TNA-5 is equally effective in staple, yarn, or piece-goods dyeing. And it is especially helpful in direct, sulphur, or naphthol dyes, where it produces excellent crock fastness and clear, brilliant colors.

3. Readily soluble. Sterling TNA-5 dissolves quickly and completely in hot or cold dyeing solutions. And the dissolved reagent soon permeates the entire bath. Thus, you can add dry TNA-5 to a dye bath without causing salt streaks in the finished product.

4. Works dry or in brine form. Whichever way you prefer to use Sterling TNA-5—dry or as brine—you'll get the same excellent results. Many users, however, make TNA-5 into brine in the automatic Sterling TNA-5 Dissolver. This permits economical bulk buying of TNA-5, plus the extra convenience of *piping* TNA-5 brine to the different dye baths.

5. Recommended by dyestuff manufacturers. Sterling TNA-5 has won the approval of many dyestuff manufacturers. The main reason is that this remarkable dyeing reagent lets their dyes show up better on a variety of fabrics. In fact, dyestuff manufacturers were instrumental in getting TNA-5 tested and accepted in a great many plants throughout the country.



Sterling TNA-5 is used exclusively by the Northern Dyeing Corp., Washington, N. J., to give the depth of color and luster they require for their famous Castle Creek Prints.

INTERNATIONAL SERVES ALL OF TODAY'S TEXTILE NEEDS

Through skilled and experienced salt specialists, International Salt Company can help dye houses and textile mills get greater efficiency and economy in their dyeing processes. In addition to new Sterling TNA-5 Reagent, International also produces high-quality Sterling Evaporated and Sterling Rock Salt in all types and sizes. And we also make automatic dissolvers in metal or plastic for these products. So we can recommend the type of salt most perfectly suited to your plant's needs.

If you'd like the assistance of an International technician on any problem concerning salt or brine—or further information on new Sterling TNA-5—call your nearest sales office. Or write to us direct.

INTERNATIONAL SALT COMPANY, INC., SCRANTON 2, PA. • Sales Offices:

Atlanta, Ga.	Chicago, Ill.	Memphis, Tenn.	Philadelphia, Pa.
Baltimore, Md.	Cincinnati, O.	Newark, N. J.	Pittsburgh, Pa.
Boston, Mass.	Cleveland, O.	New Orleans, La.	Richmond, Va.
Buffalo, N. Y.	Detroit, Mich.	New York, N. Y.	St. Louis, Mo.

Modern research in textiles gives you **STERLING TNA-5**

PRODUCT OF INTERNATIONAL SALT COMPANY, INC.

For more data, circle A-40 on Reader Service Card

For more data, circle A-41 on Reader Service Card →

33

MORE THAN EVER, FAST SHADES FASTER WITH CIBALAN® DYES

CIBA Research in dyeing developments for both natural and synthetic fibers produces tangible results that assist the dyer, such as these newest additions to the CIBALAN Dyes. The widest selection of dyes among any neutral pre-metallized dye range, the CIBALAN Dyes are unsurpassed for the dyeing of wool, silk, and nylon in fast shades at pH value to suit the fiber.

CIBALAN RED BROWN RL... Bright reddish brown for copper and rust shades; very good fastness, especially to light.

CIBALAN BLACK 2GL... Attractive greenish black, in natural or artificial light; good union on wool/nylon; good fastness.

C I B A

This molecular structure of neutral pre-metallized dyes symbolizes the "thoroughbred" calibre of CIBALAN Dyes.

JACQUES WOLF

Combination for Protection

...Against Gas Fading

Jacques Wolf's versatile Dileine and Meleine series of inhibitors offer you a complete range of gas fading protection in both the dyeing and finishing process.

For a positive guard against gas fading it will pay you to investigate the Dileine and Meleine series for superior results, greater selectivity, and ease of application. These versatile inhibitors can be *custom formulated* to meet your specific problems and plant conditions.

DILEINE for Dyeing—Eliminates predyeing operation and special preparation of goods. Dyeing may be carried out at high temperatures when Dileine and dyestuff are used simultaneously in dyebath.

MELEINE for Finishing—Applied in the finishing operation of box or jig dyed fabrics. Assures a supple hand on resin treated fabrics. Highly resistant to drycleaning and washing.

Write today for complete details and specifications. If you have a particular gas fading problem our technical department would welcome the opportunity of working with you towards a solution.

JACQUES WOLF & CO.
Chemicals PASSAIC, N.J.

Plants in: Clifton, N.J., Carlstadt, N.J.
Los Angeles, Calif.

New Resins Require No Catalyst—

Resins that are suitable for wash-and-wear finishes and do not need catalysts to effect a cure have been developed in England.

The water-soluble stable precondensates can be made from urea, melamine, guanidine, or dicyandiamide. A resin of this type is described in British Patent 796815. The reaction is between urea, formaldehyde, and epichlorhydine and results in a mixture of two main products and a reaction product of these.

One of the products, containing glycol and chloromethyl terminal groups, acts as the curing catalyst, while the other has an epoxy group that acts as a resin plasticizer. The end effect is a resin that can be cured at 110° C. and produces non-yellowing crease-resistant finishes. Dimensional stability of fabrics treated with the resin is good, and no afterwashing is necessary.

Softeners or water repellents may be added to the precondensate solution to give desirable modifications of fabric hand.

Solvents Speed Wool Dyeing—

As little as 5% of butanol or benzyl alcohol added to wool dyebaths speeds up color absorption so that the process is complete in 5 to 10 mins. at 95° C. Colorfastness is equivalent to that obtained by conventional methods that require 1 hr. or more.

Workers at the Swedish Institute for Textile Research have applied this method so far only to loose wool, but they aim to develop the process so that continuous piece dyeing of woolens is a practical reality.

Fluid Beds Find Many Uses—

The fluid-bed system of applying heat to textiles is being used in many processing steps, according to a recent British report. These uses include singeing, heat-setting, dye fixation in the Thermosol process, resin curing, and water-repellent application.

Direct contact of the fabric with the siliceous sands used in the fluid beds provides much more rapid heat transfer than can be obtained in hot-air systems.

New Uses for Infrared Spectroscopy—

Fiber structure and identity can be readily evaluated by a method developed by USDA's Southern Utilization Research and Development Div. laboratories.

Infrared absorption spectroscopy can be used to investigate modifications of cotton, such as oxidation and degree of substitution, and to identify and measure the components of blended fabrics.

Considerable information can be gained by infrared spectroscopy about the differences between natural and modified cellulose. Spectra of mer-

cerized or acetylated cotton, as well as carboxymethylated cotton and cellulose acetate show a lessening of the degree of hydrogen bonding. Crystallinity, decrystallization, cross-linkages, and extent of oxidation are readily detected.

Complete reports on infrared spectroscopy as applied to cellulosic materials are available from Southern Utilization Research and Development Div., P. O. Box 7307, New Orleans 19, La.

Low-Foaming Detergents—

Detergents that have outstanding surface-active properties and yet produce little foam are a recent British development.

The detergents are based on a hydrophobic random copolymer made by condensing a mixture of propylene and ethylene oxides and a selected organic compound such as propylene glycol. The hydrophilic radical is formed by reacting the condensate with ethylene oxide.

Instead of using propylene glycol for the preparation of the hydrophobic polyoxypropylene-polyoxyethylene random copolymer, it is permissible to use glycerine, butylene glycol, glycollic acid, penta-erythritol, or oxalic acid.

Weathering Affects Wool Quality—

The South African Textile Research Institute has found that weathering has several important effects on wool. For instance, the institute claims to have positive proof that the uneven dyeing characteristics of tippy wool is caused by the changes made by weather in the fiber tips.

In the course of the investigation on tippy wool, workers found that the dyeing characteristics of wool could be predicted by treating the fibers with ninhydrin. If tippy wool is treated with this chemical, it will develop a distinct blue color in the weathered areas; and by means of this test, manufacturers should be able to test wool before mixing to avoid trouble in dyeing.

Another effect of weathering is a variation in the shrinkage characteristics of wool. Tip wool, which is normally badly damaged by weather, shrinks and felts more readily than root wool. The sheep's diet also affects the quality of wool. Copper-deficient wool, which normally is partly or entirely devoid of natural crimps, felts most readily even though the strength of the felt is rather low.

The effect of South African climatic extremes on wool could possibly be reduced by careful breeding and improved feeding programs.

pH Control Cuts ClO_2 Corrosion—

The corrosion problems peculiar to the use of sodium chlorite as a bleaching agent are much reduced by a method developed in Switzerland. The process is described as depending on activators based on ammonium salts of organic bases with strong inorganic or organic acids.

When such materials are added to the impregnating bath, they produce a faintly alkaline pH; but when the impregnated goods are heated to 90 to 100° C., the basic component of the activator volatilizes and the acidic component releases ClO_2 to produce the bleaching effect.

Advantages of the process include good bleach-bath stability up to 40 to

50° C., little or no corrosion of stainless-steel impregnating equipment, and highly efficient utilization of the sodium chlorite.

The productive capacity of open-width or rope systems of bleaching that use sodium chlorite activated in this manner is good. Dwell time at 90 to 100° C. is 30 to 60 mins. The fabrics are thoroughly bleached without damage and have the good hand characteristic of chlorite bleaching.

How Heat Affects Dyeability—

Any heat treatment of fiber or fabric that precedes dyeing can have a definite effect on how the material will dye.

In a paper presented before AATCC, Neil Truslow, U. S. Rubber Co., showed that heat applied to polyester, polyamide, and acrylic fibers produces considerable physical and even chemical changes that affect the dyeing characteristics of the fiber.

Temperature is the biggest single factor in variation of fiber dyeability; but time, tension, and moisture content of the fiber are also affecting influences. As an example of how even small variations in heat can affect subsequent dyeing, Truslow pointed out that shiners, generally considered to be purely a result of uneven tension in slashing, can in part be produced by the relatively low temperatures of slashing.

When heat treatments that are applied to produce dimensional stability are employed, it is extremely important that temperature variations be closely controlled. As an example, polyamide fibers that are heat-treated in the 300 to 360° F. range will show varying dyeability if there is as little as 6° F. variation in temperature. If the heat treatment is conducted at temperatures closer to the melting point of the fiber, the need for close control becomes even more critical.

The type of heat, moist or dry, also affects dyeability. Experiments showed that nylon 6 heat-treated with steam took up four times as much dye as the same fiber treated with dry heat.

Tension applied during heat treatment also affects dye uptake. Tension during heat treatment of any kind tends to increase orientation, which reduces dye uptake.

NEW DYES AND CHEMICALS

Thermosetting Resin

Wash-and-Wear Resin EL . . . produces durable wash-and-wear finishes that have excellent resilience and wrinkle recovery. Fabrics treated with the product have good dimensional stability, and laundering with chlorine has a minimum effect on the resin. Chemical Products Corp., P. O. Box 61, Little Falls, N. J.

Circle D-1 on Reader-Service Card

Printing Vat Color

Heliane Scarlet J2N Optima Paste . . . is particularly recommended for printing on cellulosic or cellulose-acetate fabrics for the production of bright, fast shades of scarlet. The color does not bleed, is remarkably free from washing off during oxidation, and fixes easily. All-around fastness properties are generally very good except that in pale shades lightfastness is fairly good. Francolor, Inc., R. I. Hospital Trust Bldg., Woonsocket, R. I.

Circle D-2 on Reader-Service Card

Vat Dye

Sandothrene Grey N2GR Paste Ultrasperse . . . produces desirable gray shades on cotton that are fast to mercerizing and boiling. The slow exhaustion rate of the dye makes it particularly suitable for application to packaged yarn or beams. The shade is relatively unimpaired and its lightfastness is slightly improved when after-treated with UF or melamine resins. The dye is also recommended for printing by the flash-ageing method. Sandoz, Inc., 61-63 Van Dam St., New York 13, N. Y.

Circle D-3 on Reader-Service Card

Wool Dye

Irganol Red RLS . . . dyes wool, silk, or nylon bright shades of red that have excellent all-around fastness properties, particularly to light.

The color complements other dyes in the Irganol class and has the characteristically good solubility of other dyes in this range. Geigy Dyestuffs Div., Geigy Chemical Co., Ardsley, N. Y.

Circle D-4 on Reader-Service Card

NEW DYES AND CHEMICALS *(Continued)*

Resin Buffer

RFB-X353 . . . protects resin finishes from hydrolytic decay caused by storage or laundering. The product is effective on UF, MF, and DMEU resins but not on triazone resins that have been applied to fabrics that are not afterwashed. The buffer will protect cured triazone resins if it is included in the afterwashing cycle. Easton R. S. Corp., 876 Pacific St., Brooklyn 38, N. Y.

Circle D-5 on Reader-Service Card

Antibronzing Agent

Rexolube AC . . . eliminates traces of unreacted chemicals in diazotizing baths and so prevents the development of bronzy streaks or areas during subsequent coupling. The product, based on sulfamic acid, is applied at the rate of 2 to 4 lbs. per 100 gals. of rinse water. After diazotizing, goods require only one fresh-water rinse and one pass through the solution of Rexolube AC to prepare them for development. Emkay Chemical Co., 319-325 Second St., Elizabeth, N. J.

Circle D-6 on Reader-Service Card

Thermosetting Resin

Safe-T-Set . . . produces excellent wrinkle recovery and dimensional stabilization in cellulosic fabrics. The product does not contribute to loss of tensile strength when fabrics treated with it are subjected to standard chlorine-damage tests. Proctor Chemical Co., Salisbury, N. C.

Circle D-7 on Reader-Service Card

Vat Dye

Cibanone Brown 3B Double Paste . . . produces medium-brown shades by all usual vat-dyeing methods. The dye has good lightfastness, builds up well, and is suitable for fabrics that will be resin-treated. It is suggested for shades of all practical depths on piece goods where its level-dyeing qualities are important.

Besides excellent lightfastness, the dye has very good fastness to washing, crocking, weathering, and chlorine. It may be used in discharge printing of pastel shades. Ciba Co., Inc., Box 25, Village Station, New York 14, N. Y.

Circle D-8 on Reader-Service Card

Defoamer

Nopco KF-99 . . . controls foam in dyeing, sizing, and scouring baths, as well as in bleaching and finishing operations. One to four ounces of the product per 100 gals. of solution are sufficient to control foaming. Print-paste viscosities are not affected by addition of the defoamer. Nopco Chemical Co., 60 Park Place, Newark, N. J.

Circle D-9 on Reader-Service Card

Dyeing Assistant

Laurel S.D.50 . . . is useful in scouring, dyeing, emulsifying, and wetting operations. Described as an amine-neutralized alkyl aryl sulfonate, the product is stable to acids and mild alkalis, rinses well, and has no inorganic-salt content. The latter quality makes it particularly suitable as a penetrant in emulsions that are sensitive to electrolytes. Laurel Soap Mfg. Co., Inc., Tioga, Thompson, and Almond Sts., Philadelphia 34, Pa.

Circle D-10 on Reader-Service Card

Modified UF Resin

Lyofix PR . . . is designed to overcome some of the major weaknesses of UF resins. The product offers the advantages of lower strength loss, less effect on lightfastness, and greater resistance to chlorine retention after repeated launderings than earlier types of UF resins. The resin can be combined with suitable water repellents or softeners to produce various modifications of the basic hand. Ciba Co., Box 25, Village Station, New York 14, N. Y.

Circle D-11 on Reader Service Card

Bacteriostatic Finish

Eversan . . . inhibits the growth of odor-forming bacteria when applied to cotton, rayon, wool, and a number of man-made-fiber fabrics.

The product is effective over a broad spectrum of bacteria and works by attaching a bactericidal metal atom to cellulosic or keratinic molecules.

Fabrics finished with the material remain effectively protected against bacterial decomposition products after 50 launderings. The finish is nontoxic, nonirritating, and does not provoke allergies. Ions Exchange & Chemical Corp., 48 Leonard St., New York, N. Y.

Circle D-12 on Reader-Service Card

Penetrant

Emkatex DX . . . is particularly suited to increase the penetration of flameproof finishes. Addition of 1 to 2 qts. per 100 gals. of the product to finishing solutions increases absorption and improves the flameproofing effect. Emkay Chemical Co., 319-325 Second St., Elizabeth, N. J.

Circle D-13 on Reader Service Card

Vat Dye

Calcoloid Fast Yellow 6GL Single Paste . . . dyes cotton or rayon bright greenish-yellow shades of superior lightfastness. The color is also fast to perspiration, crocking, washing, chlorine, drycleaning, hot pressing, water-spotting, and continuous chlorine- or peroxide-bleaching processes.

The dye produces level dyeings and withstands the usual mill processing. It is applicable to raw stock, piece goods, yarns, or hosiery. American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y.

Circle D-14 on Reader-Service Card

Body-Odor Finish

Cyana Purifying Finish . . . a durable protection against formation of body odors on fabrics, kills both types of bacteria—Gram-positive and Gram-negative—that cause body odor from perspiration. Both laboratory and wear tests show excellent results in body-odor control. On cotton and cotton-blend fabrics, the finish remains effective after as many as 50 washings. It is compatible with other finishes except chlorine bleaching, which minimizes the odor-killing effect. It can be applied in an afterwash or in a resin bath. American Cyanamid Co., Textile Chemicals Dept., 110 W. 40th St., New York, N. Y.

Circle D-15 on Reader Service Card

For more data, circle A-43 on Reader Service Card →

Mirror mirror on the wall... which colors are the best of all?

AMANTHRENE® Vat Colors

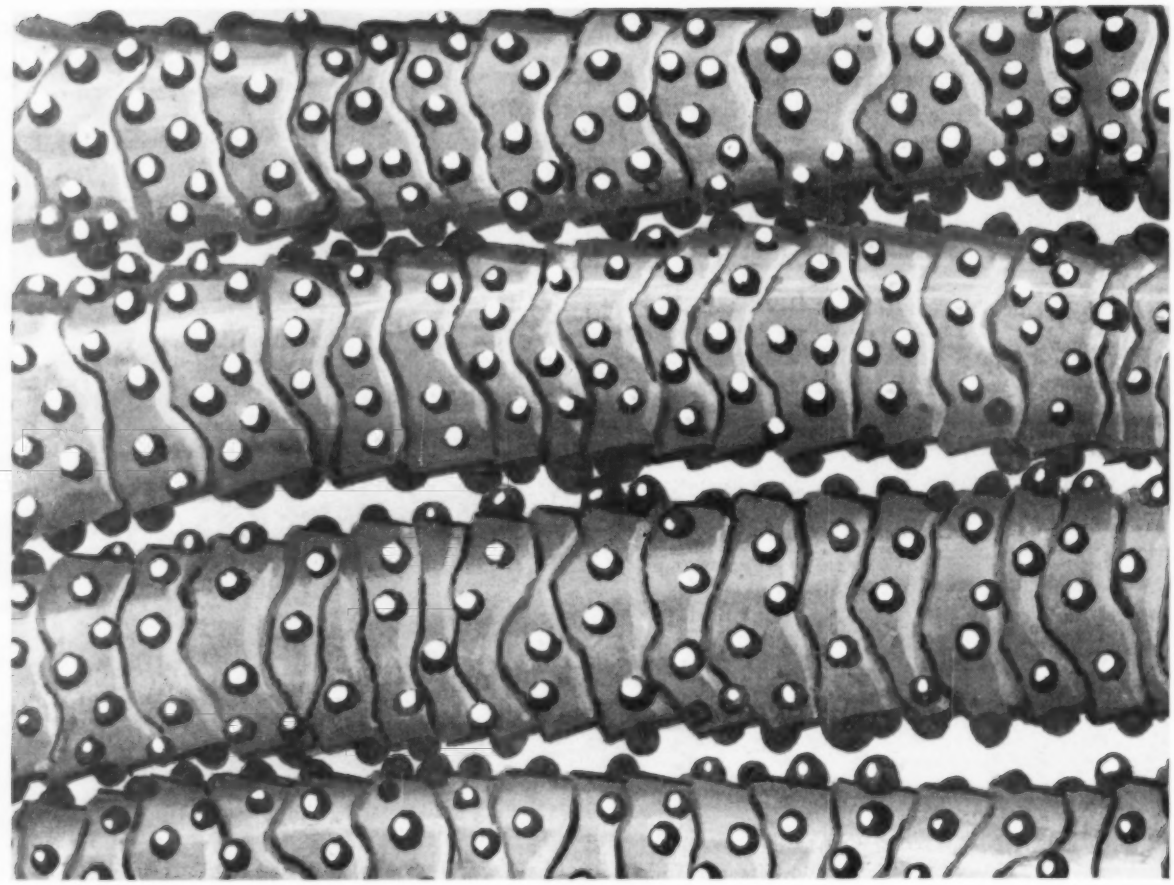
No need for reflection . . . new AMANTHRENE Vat Colors provide the answer — because these highly concentrated colors enable you to obtain rich, warm hues that are exceptionally fast to washing and to light. Perfect for cottons and rayons — easy-to-use AMANTHRENES are available in a full range of colors. For complete information, write or call your nearest Koppers representative. Our laboratory facilities and technicians are always available to help you whenever the need arises.

KOPPERS COMPANY, INC.
CHEMICALS AND DYESTUFFS DIVISION
Pittsburgh 19, Pa.

KOPPERS®

(FORMERLY AMERICAN ANILINE PRODUCTS) **PLANT**: Lock Haven, Pa.
BRANCHES: Providence, R. I. • Philadelphia, Pa. • Paterson, N. J. Chicago, Ill. • Charlotte, N. C. • Chattanooga, Tenn. Columbus, Ga. • Los Angeles, Calif.
IN CANADA: Dominion Anilines & Chemicals, Ltd., Toronto, Canada • Montreal, Canada

KOPPERS DYES ARE RIGHT FOR EVERY FIBER



Millions of submicroscopic particles of Syton increase interfiber drag, hold fibers in place, enable you to spin finer yarns.

You can get finer yarns from coarser stocks with SYTON

SYTON—T. M. Monsanto Chemical Co.

Check these 10 advantages you get with Syton:

- High interfiber drag
- Fast, easy carding—reduces harmful effects of static electricity
- Lighter, finer counts from coarser fibers
- Less twist for the same strength
- Fewer ends down
- More uniform, condensed rovings
- Higher spinning speeds
- Increased tensile strength
- Improved color
- Improved processing of 100% synthetic fibers on woolen systems

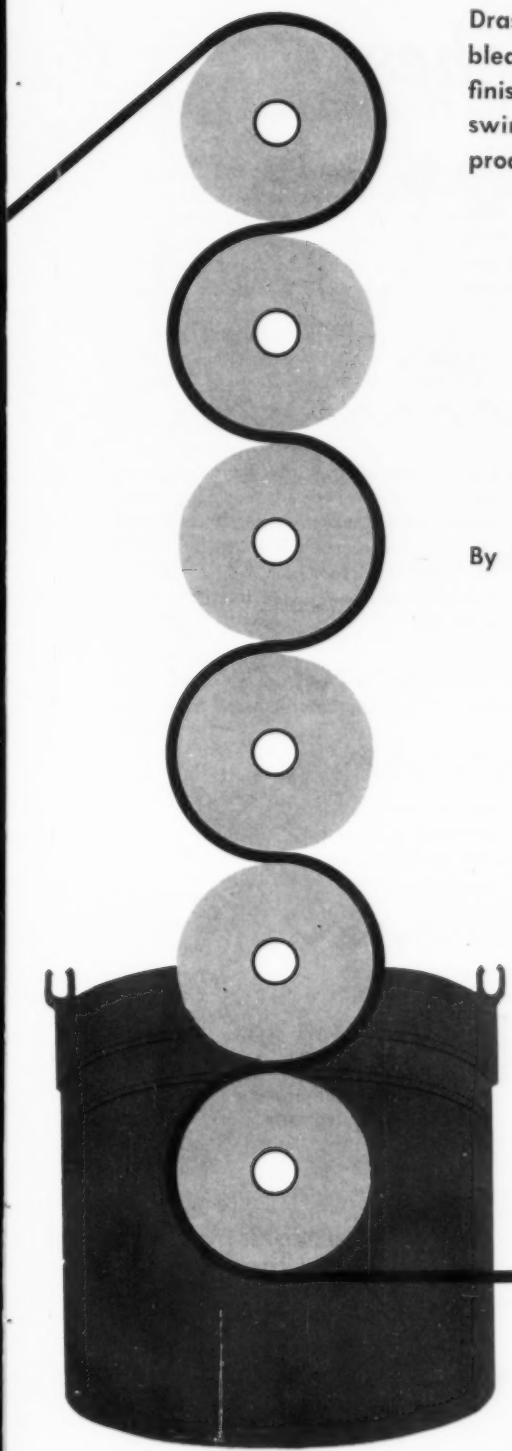
SYTON is an odorless, translucent, pH-stable silica sol for use alone or with other finishes. It distributes uniformly; requires no special equipment, after-treatment or curing. It is highly resistant to dry cleaning yet removes easily from stock by mild scouring.

Monsanto Technical Bulletins tell all about Syton in textile finishing. Request one from your local Monsanto representative, or write: MONSANTO CHEMICAL COMPANY, Inorganic Chemicals Division, Lindbergh and Olive Street Road, St. Louis 24, Missouri.

Monsanto

Where Creative Chemistry Works Wonders For You

what's happening in the CHEMICAL-TREATMENT BUSINESS



Drastic changes now going on in bleaching, dyeing, printing, and finishing are causing sharp swings in that area of textile production and business.

- **Plant locations are shifting**
- **Costs are rising**
- **Profits are in a squeeze, particularly in small plants**

But progressive plants are setting a new pace with—

- **New finishes and colors**
- **Modern equipment and methods**
- **Realistic pricing policies**
- **Aggressive merchandising**

By **ROBERT W. PINAULT,** Assistant Editor, TEXTILE WORLD

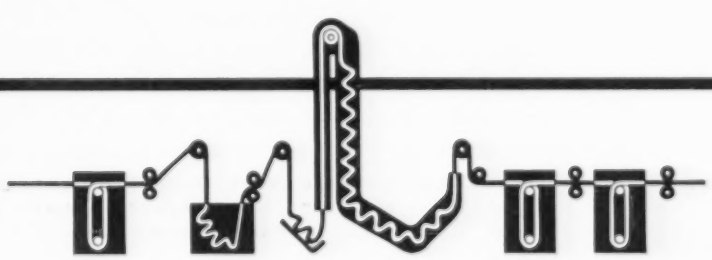
Chemical treatment of textiles is undergoing radical change in the U. S.

Technological improvements—new fibers, better finishes, and better processing methods—have largely outmoded pre-World War II practices. But equally important, the squeeze of changing economics has to a great extent put a new face on the finishing business.

Finishers added about $500-million to the value of goods produced in 1956, the latest year for which figures are available. That amounts to about 9% of the total value of $5,317,304,000 added by manufacturing that year.

Yardage of goods, exclusive of wool fabrics, finished in 1956 amounted to 10.1-billion linear yards, of which cotton accounted for 8-billion yds. and silk and man-made fibers 2.1-billion yds.

In adding the $500-million to the value of goods in 1956, textile plants used $386-million worth of chemical materials. This amount was distributed as $175-million for dyes and finishing materials and $211-million for other chemicals.



← For more data, circle A-44 on Reader Service Card

Textile people are talking about . . .

Emulsifiable A-C® Polyethylene

best for finishes!

"I'm getting wash and wear finish advantages with A-C Polyethylene I never dreamed possible . . . and all at a *low finishing cost!*"

"I'm getting higher abrasion resistance, increased tear strength and improved sewability, to name only a few advantages. I'm 'sold' on A-C Polyethylene compounded finishes!"

"I like A-C Polyethylene because I can use it on *anything*: Blends, Wool, Rayon, Silk, Acetate, Orlon, Dacron, other Synthetics, Cotton—anything!"

"I like the reduced needle cutting, better lubricating qualities and non-chlorine retention features of A-C Polyethylene."

"I used to think all polyethylenes were the same but tests prove that Emulsifiable A-C Polyethylene for finishes is in a class by itself. It makes high concentrates, a small particle size and storage-stable emulsions."

SEMET-SOLVAY PETROCHEMICAL DIVISION
DEPT. 525-AH 40 RECTOR STREET
NEW YORK 6, NEW YORK

Allied Chemical

migration hits finishing plants

Textile finishing, like gray-goods manufacturing, is shifting South, seeking more favorable economic conditions.

At latest reports (June, 1958), there were 416 finishing plants of all types in New England, 652 in the Middle Atlantic states, and 480 in the South Atlantic states. The other 314 of the 1,862 total plants in the U.S. were mostly in the East North Central and East South Central areas. California accounted for 38 of the 314 plants.

But number of plants can be misleading. Only in New England does the percentage of the total plants come close to coinciding with the percentage of total yards of goods processed.

In the Middle Atlantic states, a preponderance of small plants gives the area a large number of plants but a small percentage of total yards run. The reverse is true in the South: a relatively small number of large plants turn out a large volume of goods.

Figures are not precisely parallel, since latest figures for yards produced are for 1956 and figures on number of plants are for June, 1958, a year and a half later. However, the trend has not changed. In fact, any differences would favor the South and other states, since there have been a few more plant closings in New England and the Middle Atlantic States since 1956, some of them large plants.

But using 1956 yardage figures for cotton and man-made fibers and 1958 number-of-plants figures, here's how the percentages ran for different areas:

Area	% of U.S. plants	% of total yards
New England	22%	24%
Middle Atlantic	35	19
Southeast	26	46
Other States	17	11
	100%	100%

U. S. Gains—North Loses

From 1948 to 1956, the linear yards of cotton and man-made-fiber goods bleached, dyed, printed, and finished in the U.S. rose from 8,840,437,000 yds. to 10,188,114,000 yds.—an increase of 1,347,677,000 yds., or 15.2%.

The South made the whole gain, plus getting slightly over half a billion yards processed in other areas in 1948. The South's gain was from 2,873,238,000 yds. in 1948 to 4,736,167,000 yds. in 1956—a gain of 1,862,929,000 yds., or 64.8%.

Here's how shifts in volume occurred in various sections of the country in the eight-year period 1948-1956:

Cotton Goods

U.S.
1948 — 6,779,692,000 (yds.)
1956 — 8,039,956,000
(gain) 1,260,264,000 yds., or 18.6%.

New England
1948 — 2,218,490,000 (yds.)
1956 — 1,978,901,000
(loss) 239,589,000 yds., or 10.8%

Middle Atlantic
1948 — 969,390,000 (yds.)
1956 — 706,327,000
(loss) 263,063,000 yds., or 27.1%

Southeast
1948 — 2,678,880,000 (yds.)
1956 — 4,327,000,000
(gain) 1,648,120,000 yds., or 61.5%

Other States
1948 — 912,932,000 (yds.)
1956 — 1,027,728,000
(gain) 114,796,000 yds., or 12.5%

Man-Made-Fiber Goods

U.S.
1948 — 2,060,745,000 (yds.)
1956 — 2,148,158,000
(gain) 87,413,000 yds., or 4.2%

New England
1948 — 425,387,000 (yds.)
1956 — 473,091,000
(gain) 47,704,000 yds., or 11.2%

Middle Atlantic
1948 — 1,380,942,000 (yds.)
1956 — 1,192,982,000
(loss) 187,960,000 yds., or 13.6%

Southeast
1948 — 194,358,000 (yds.)
1956 — 409,167,000
(gain) 214,809,000 yds., or 110.5%

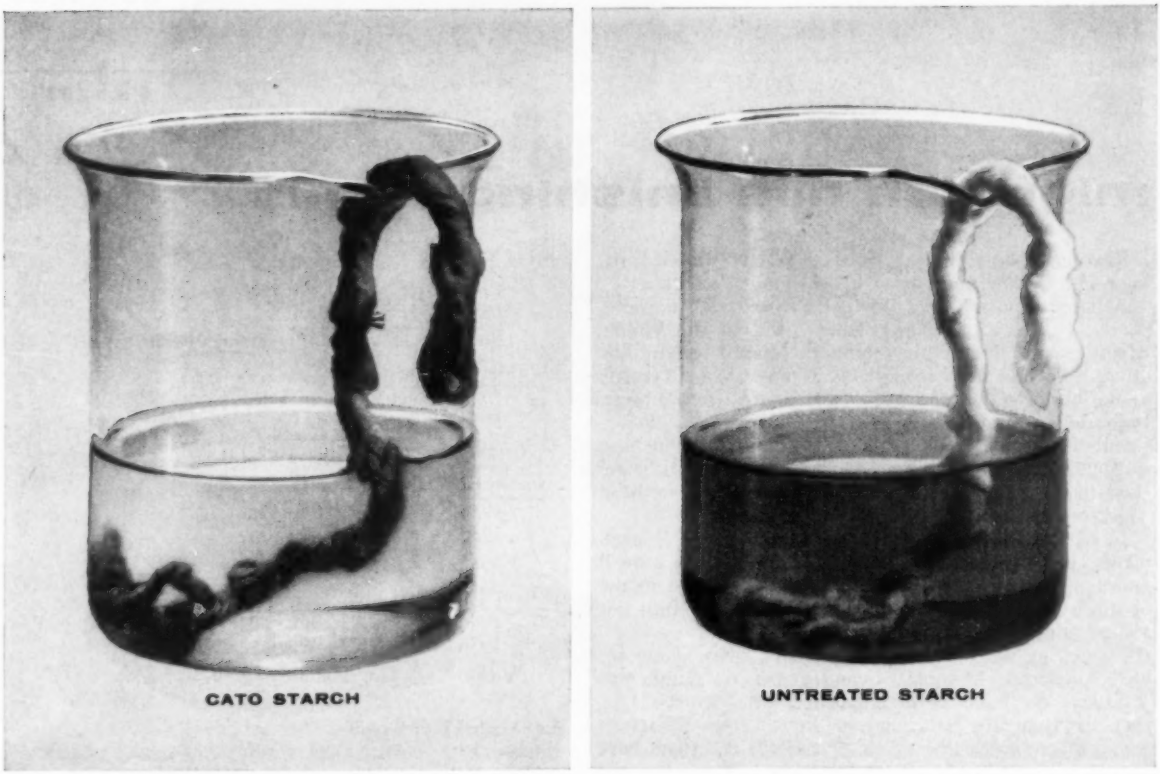
Other States
1948 — 60,058,000 (yds.)
1956 — 72,918,000
(gain) 12,860,000 yds., or 21.4%

Dependable figures for woolen and worsted finishing are not available; but the picture follows the same trend, except that the shifts have been more pronounced.

For example, in value added by manufacture in woolens and worsteds, the U.S. total dropped 57% between 1947 and 1954. While the Southeast racked up a gain of 80%, every other area suffered a loss: New England 54%, Middle Atlantic 49%, and other states 69%.

CATO®

CATIONIC STARCH FOR WARP SIZING



IODINE TEST proves greater starch affinity

A simple experiment. Take 100 ml. of solutions of Cato and corn starch at 0.005% concentration. To each add a 1 gram strand of any anionic yarn: cotton, wool, viscose, dacron, or others including blends. Boil for a few minutes. Cool and allow strands to drain as shown above. Now add drops of iodine to the strands and their respective solutions.

What happens?

The blue of the iodine test for starch proves the much greater affinity of Cato to anionic yarns—due to its patented cationic molecular structure. Showing how Cato promotes better adhesion, reduces shedding and improves weaving in warp sizing.

Interested? We'll be glad to supply trial quantities and have one of our textile specialists demonstrate in your plant.

National

STARCH PRODUCTS INC.

750 Third Avenue, New York 17 • 3641 So. Washtenaw Avenue, Chicago 32 • 735 Battery Street, San Francisco 11

For more data, circle A-46 on Reader Service Card

Jobs Shift With Plants

The switch in the location and number of cotton-finishing plants caused an even sharper shift in finishing-plant employment. From 1946 to 1956, New England lost 7% of its jobs in dyeing and finishing (from 19,348 to 17,926), the Middle Atlantic states lost 36% (from 23,204 to 14,901), while the Southeast gained 29% (from 19,233 to 24,953).

On top of that, in the last two years in the Northern and Middle Atlantic states 17 cotton-finishing plants have closed. Twelve of thes plants had printing equipment. At least 90 printing machines have been taken out of production in New England and the Middle Atlantic states.

However, printed-goods production declined 15% in 1957 over 1956, and there was a further loss of 13.9% in the first quarter of 1958 over 1957. So this loss of printing equipment has not been felt.

what's causing the shift

The basic reasons for this shift in finishing-plant locations bear on costs.

The wage differential between North and South is greater in finishing plants than in cotton manufacturing. This situation was true in 1946; and in spite of substantial wage-rate increases in the South, there is still a considerable difference in wages in the two areas. Wages in finishing plants in the Southeast average $1.41 per hr., while plants in the metropolitan area of New York have to pay an average of $1.81 per hr.

This difference of 28% in labor costs is serious enough in itself to prevent many plants in the North from showing a profit.

But the productivity factor—what a worker can or will produce for his pay—shows an even greater variation between Northern and Southern finishing plants. Artifical restrictions on the productivity of workers are common in the union shops in the North and contribute more than the wage differential to the cost of production.

Union Restricts Production

As an example, a skein-dyeing plant in the Paterson, N. J., area had workloads set up so that the operators need to produce only four rounds, or complete dyeings, in an 8-hr. shift starting at 7 a.m. On standard light shades, this amount of work is often accomplished by 1 p.m. If management wants an extra round, it must pay time and half for the remaining 2 hrs. If there is no work, the operators get paid for 8 hrs. and go home at 1 p.m. Management is thus penalized regardless of whether business is good or bad.

A Central States dyehouse is faced with a similar problem in the jig room. At this plant, one man tends five jigs and has a color carrier to service the unit. If a roll is finished and ready to be taken off the jigs at 11 a.m., the first-shift operator will not take it off; that job is for the second-shift man when he comes on at 3 p.m. Thus the plant has 75 jigs and pays 15 operators to do the same amount of work that half that number of machines and men would do in other localities.

However, wage differentials and production restrictions don't tell the whole story. The antiquated physical layout of the old, multistory plants common in the New York and New England areas impose operating expenses too high for these plants to compete with the modern plants now in operation in the South. Also, these new plants enjoy lower taxation in the less-congested areas of the South.

But one of the prime factors that has contributed to the loss of plants in the North is the actual will to live. Confronted with the price-wage squeeze, old plants, and obsolete equipment, some managements have just decided to cut their losses and quit rather than risk capital to put their plants on a competitive basis. Others see little advantage in rebuilding in the old area and rebuild elsewhere.

finishing costs are rising

The finishing plant's dollar is spent principally for labor and consumable supplies. Overhead expense—including office expense, maintenance, merchandising costs, if any, and the many miscellaneous expenses—account for most of the difference between income and the labor and supply costs.

Labor Costs

Labor costs vary quite widely, with a heavy cost advantage in favor of plants that are able to process long runs of fabric through continuous machines over plants that process many small individual lots.

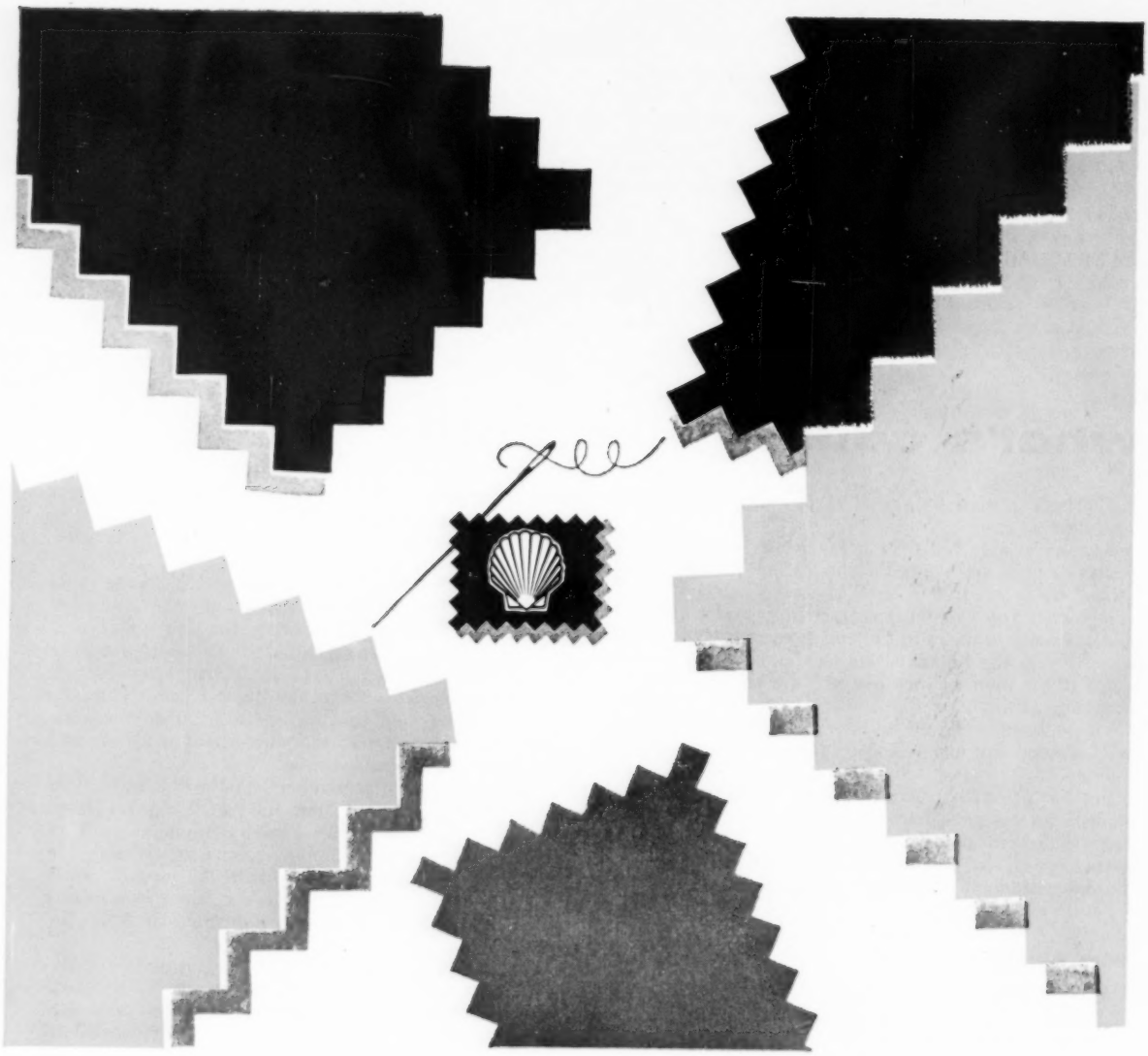
Cotton bleacheries figure direct labor costs at 25% to 30% of total operating cost.

Plants that do most of their processing in jigs or becks must allot up to 40% of their dollars to direct labor costs.

Labor's share of the fabric-finishing dollar has become progressively greater even as methods and machinery have been improved. In 1947, each production worker in finishing plants produced 131,110 yds. of finished goods. In 1954, each such employee produced 137,072 yds. The gain in productivity was 4.5%; but the wage-rate increase was 31%, based on an average 1947 wage of $2,809 compared to the 1954 wage of $3,685.

Supply Costs

There is also considerable variation in the costs for supplies between finishing plants that handle widely divergent lines.



In textile bleaching and oxidizing...

get brighter vat colors...clear whites with H_2O_2

If you are looking for an economical textile bleaching and oxidizing agent, it will pay you to investigate hydrogen peroxide.

In either batch or continuous process, H_2O_2 provides excellent uniformity and clear whites in minimum bleaching time.

And when you use hydrogen peroxide as an oxidizer in vat dyeing, you're assured of brighter colors and outstanding fastness in less rinsing time.

Write to the Shell Chemical district office nearest you for a sample of hydrogen peroxide.

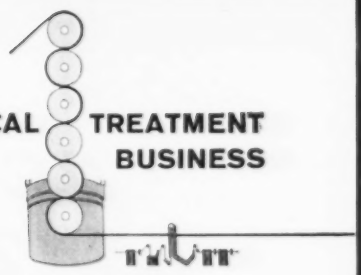
SHELL CHEMICAL CORPORATION

CHEMICAL SALES DIVISION

Atlanta • Boston • Chicago • Cleveland • Detroit • Houston • Los Angeles • Newark • New York • San Francisco • St. Louis

SHELL

For more data, circle A-47 on Reader Service Card



Chemical costs exclusive of dyes are generally high in cotton bleacheries because the expense of removing sizing and natural impurities is greater for natural fibers than for man-made fibers.

Cotton bleacheries usually figure that about 25% of total costs is consumed by chemicals. If a large proportion of the bleachery's production is dyed, dyes and auxiliaries may run materials costs to 50% of total costs.

Plants that finish man-made-fiber fabrics have somewhat lower costs for chemicals. To prepare these fabrics for dyeing or finishing is relatively simple; so the bulk of the cost for materials is represented by dyes and finishing materials.

The total costs for dyes and chemicals used in finishing man-made-fiber fabrics varies considerably according to the weight of the fabric, depth of shade, and type of dye necessary to do the job. Plants handling marquisettes, light dress goods, and other fabrics that run 5 yds. per lb. or lighter report a dye and chemical cost of 25 to 30% of their total costs. Heavier fabrics in dark shades may require as much as 75% of total costs for dyes and chemicals.

Fiber and yarn dyers that process both natural and man-made fibers find that their chemical and dye costs run 30 to 33% of total costs. Labor accounts for an almost identical figure.

A breakdown for a typical plant that dyes top and stock of wool, Acrilan, Dacron, nylon, and small amounts of the newer man-made fibers shows that on a production of 125,000 lbs. per week the bill for dyes and chemicals averages close to $500,000 annually.

A bleachery that specializes in goods that average 2 yds. per lb. and does considerable resin finishing will spend $1½-million this year for dyes and chemicals. Dyestuffs account for about half of this amount.

the big problem: profits

Like all other segments of the textile industry, finishers, whether independent or part of an integrated manufacturing-and-finishing operation, face the big problem of showing a profit on their operations.

Also like the rest of the industry, they must solve the profit problem by meeting certain challenges always present in a highly competitive industry composed of hundreds of plants of various sizes.

Among these challenges are:

1. Price cutting
2. Sharp cycles in business
3. Obsolescence and rapidly changing technology
4. Sharp swings in customer preferences

1. COMPETITION AND PRICE CUTTING

Finishers complain that cut-throat competition is the real cause of their ills. The smaller man-made-fiber processors are particularly susceptible to cutting prices. The reason for this is that outside the goods produced by the vertical organizations, a large part of the balance is processed by small concerns that exert a disproportionate effect on prices.

In the Paterson area, for example, the number of finishing plants is almost the same as it was 35 years ago; but there is a vast difference in the size of the plants, their financial standing, and their ownership.

The Paterson area alone accounts for about 75 plants that process a wide variety of goods, with the accent on man-made-fiber fabrics. In the rest of New Jersey, there are approximately 100 additional dyeing, finishing, printing, and coating plants ranging from very small specialty producers to large cotton bleacheries.

The smaller operations often have a price advantage over large concerns because their overhead expenses are low. Labor costs for all plants are pretty well standardized because there are virtually no shops that are not unionized. The small shop is usually capitalized at a low figure and often does not actually own its processing machinery.

But because he is short of operating capital, the small operator is usually in need of ready cash to meet payroll and other operating expense. To keep going when business slows up, he offers his services at below the normal market price and starts a cycle of price-cutting that finally drives him or a similarly situated competitor to the wall. The life expectancy of these operations is poor; but as fast as they die, others spring up to replace them.

As one well-established supplier of chemicals who has sold in the Paterson area for many years puts it:

"We've gone into many of these smaller plants and shown them cheaper processing methods that cut their costs ¼¢ or ¾¢ per yard. Instead of reaping a benefit from the lower costs, they run to the phone and tell their converter that they'll do the work for ¼¢ to ¾¢ per yard less.

"There's no sense to this sort of business, and we watch our credit sales to these firms very carefully. Until we've done a certain amount of C.O.D. business with them, they get no credit. Then we limit them to $100 credit. In this way, we were able to keep our losses from bad accounts down to a few hundredths of 1% last year."

Such touch-and-go operations are responsible for the unsatisfactory price situation that plagues even the larger and more reputable firms.

2. SHARP BUSINESS CYCLES

The vertical organizations might seem to have an advantage over the mill-converter-finisher setup that still is responsible for a large part of finished fabrics. There are a number of factors that make this conclusion untenable as an across-the-board fact, particularly in periods of bad business and low profits.

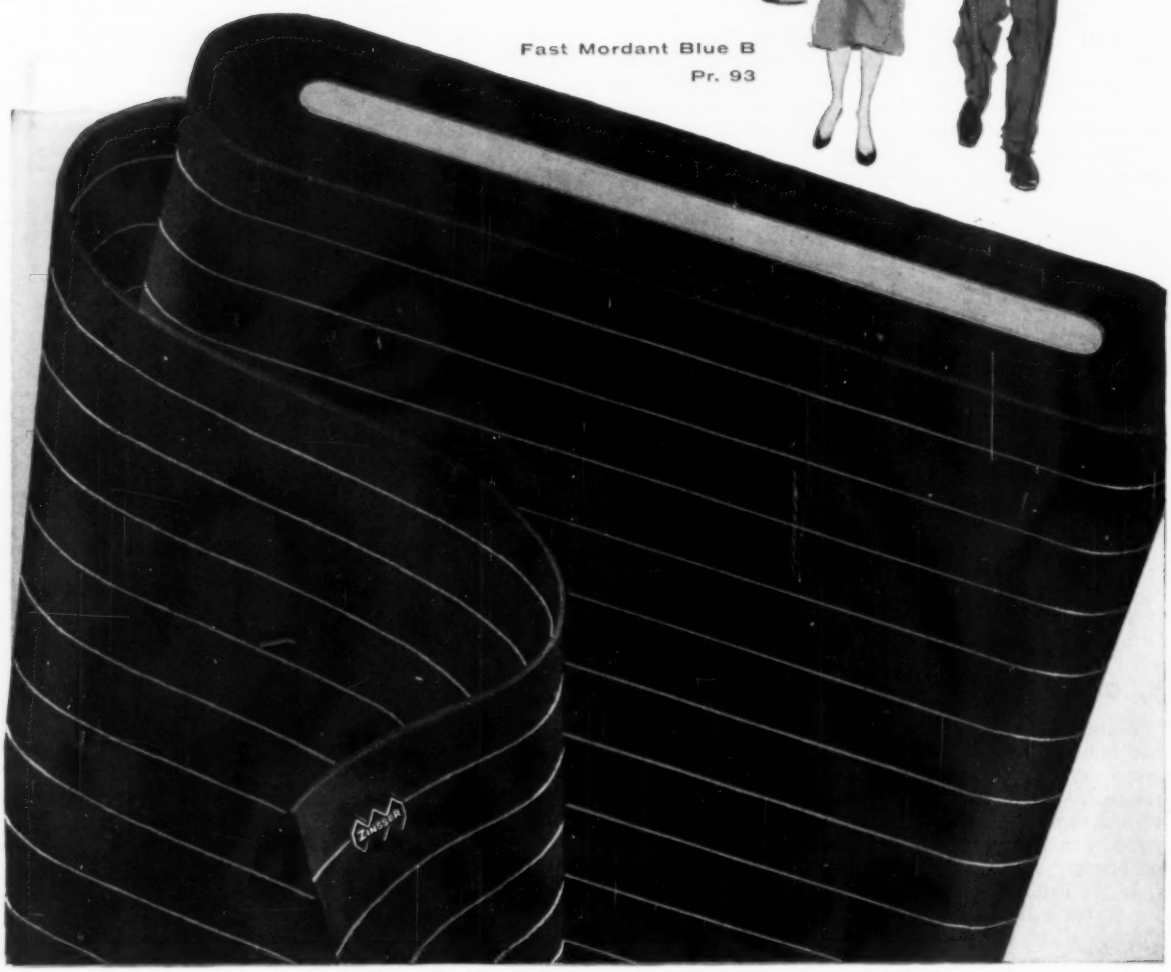
The first one is that in any well-run business, every division should show a profit; so the converting and merchandising divisions in a vertical organization must pay their own way and make some money besides or they have no excuse to exist.

Another factor of importance that faces the large integrated organization is how to keep its finishing plants busy when business is off, as it has been for the past 2½ years.

Practically all of the vertical setups are now bidding for commission work from converters in order to close the gap between their sales of finished goods and the productive capacity of their finishing plants.

ACID ALIZARINE BLUE B

Fast Mordant Blue B
Pr. 93



ACID ALIZARINE BLUE B is an acid mordant dyestuff producing full and bright Navy Blue shades, adapted for the dyeing of men's wear, uniforms and ladies' dress goods. Silk effects are left reserved.

In addition to its unexcelled light fastness, it is excellent to milling, washing, potting and decatizing. Due to its level dyeing properties, it is used extensively for the dyeing of piece goods.

HARSHAW

Reply to
ZINSSER DIVISION
Hastings-On-Hudson 6, N. Y.

THE HARSHAW CHEMICAL CO.
Cleveland 6, Ohio

For more data, circle A-48 on Reader Service Card

In at least one case, equipment has actually been leased to competitors to get some income from idle space and machines.

Then the difficulties that beset a manufacturer when he enters the very specialized field of finishing must be taken into account. He needs a new plant and a competent staff. Both will cost him more money than it cost to build and staff old, established finishing plants. And usually the shakedown period is painful to pocketbook and personnel alike.

Finally, the large organization is geared by necessity to producing staple items in long runs and is not as flexible or able to take advantage of style changes as quickly as the independent converter. Nor is it interested in the comparatively short runs that are often profitable for the smaller outfit.

Converter Plays Important Role

The independent converter still plays an important role in moving goods from the mill to the consumer. It is true that the amount of yardage handled by independent converters is much less than it was 15 years ago. In 1941, converters handled 71% of all man-made-fiber fabrics, but by 1945 this figure had shrunk to 43%. Today, by converters' estimates, the figure is between 35% and 40%.

The growth of the vertical organizations in this field is of course the prime factor in this downtrend of the independent converter's business.

But the independent converter is still a necessary and valuable aid in the movement of goods. He is the *entrepreneur* who styles fabrics, finishes, and colors. He finds new outlets for staple constructions by varying the hand and the color schemes. He is in close contact with decorators and apparel manufacturers; and because he can buy any type of fabric from any mill, he is in a preferred position to cash in on new fashions and fads as they come along.

Opinions as to whether or not the independent converter will continue to be a big factor in 10 or 20 years vary widely. Small converters say No, but they may reflect the general pessimism that pervades the business now.

One spokesman for a large vertical organization says Yes. He thinks that the flexibility of the small operator and his ability to roll swiftly along with style changes will keep him in business. Furthermore, the converters are responsible for moving much fabric simply because they come up with many ideas as to how to use standard constructions in various ways.

What the Converter Gets

The converter's markup varies widely. If he has bought wisely, knows what will sell, and can find a customer, he should realize 15% to 30% gross over his cost per yard for the goods. In the past two years, converters have seldom been able to hit a 25% markup, and many have done business at 5%.

Because prices have been so low in recent years, some converters have thrown in the sponge as buyers of fabric and continued in business merely as agents for gray-goods mills. In this way, they work for a flat commission on sales and have no money invested in goods. Their contacts in the trade are valuable to the mills; and they are still in a position to sense style changes, buyers' wants, and consumer preferences.

3. CHANGING TECHNOLOGY

Textile chemistry and chemical treatment have really come into their own only in late years. Besides the development of chemical fibers, chemical treatment of natural fibers now involves chemicals and techniques unheard of several years ago.

The sweeping changes have placed tremendous new demands on bleachers, dyers, finishers, and printers.

Take the wash-and-wear finishes for cotton fabrics, for example.

These finishes have been something of a lifesaver for a fiber sorely tried by the development of man-made fibers. In spite of the fact that the early finishes developed odors, wound up off color, and were sensitive to chlorine, customer acceptance of this type of finish has grown rapidly.

Fortunately, the finishes have been constantly improved so that the objectionable features have been eliminated or greatly reduced in effect.

Current production of resin-finished cottons is at a rate of 2-billion yds. annually and is rated at 19% to 20% of the total of cotton apparel fabrics.

The recent move toward wash-and-wear finishes for bed linen should increase the yardage with this type of finish by several million yards annually.

How Wash-and-Wear Helped Mills

The chemical finishes not only gave cotton a new lease on life but also raised the dollar volume of the finisher's business. Compared to conventional starch-oil-shrunk finishes, which can be had at 2¢ per yd. or less in bleached white, finishers can command 8¢ to 10¢ per yd. for a similar fabric in a resin finish.

While it is true that to apply a resin that is suitable for cotton fabrics may cost the finisher 1½¢ to 2¢ per yd. for materials and an afterwashing and redrying are necessary for safety, it is obvious that the profit margin is much greater for resin-finished than for plain-finished goods. In some bleacheries, wash-and-wear is already accounting for 35% to 50% of their production.

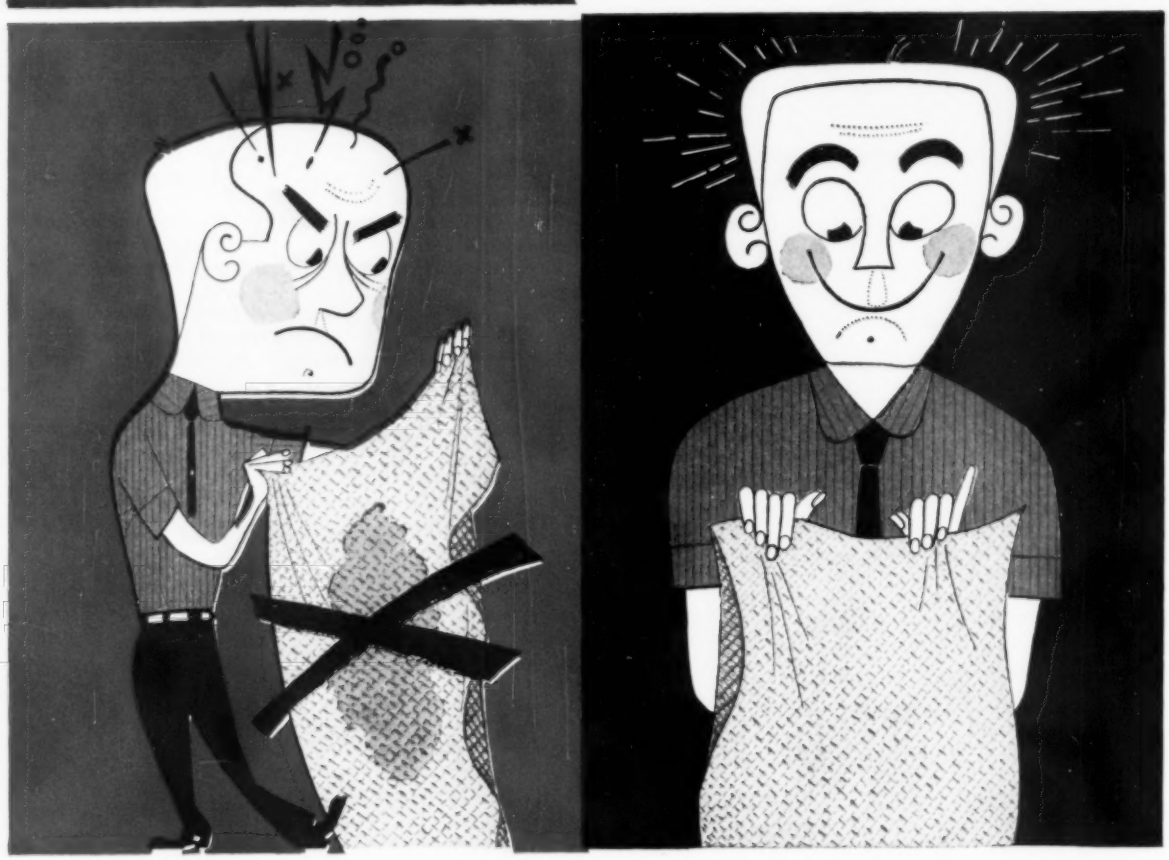
The resin finishes have not been an unmixed blessing to bleacheries. Most plants were set up to dry bleached goods only twice; and in some cases, on cheaper grades of fabric, water-mangling and finishing were done in one operation. The drying was done on a can-tenter range, and no further drying was necessary. But resin finishing requires a primary drying and a run through a tenter-curing range, and in most plants an afterwash and final drying are considered necessary.

So production can be rated roughly as one-half that possible with plain finishes. In addition, more care and skill are necessary to produce resin finishes; and equipment must be up to date and well instrumented to get consistently good results.

Some mill managements take a poor view of resin finishes because (1) the goods last longer and are replaced less frequently and (2) the same weight of goods delivered to cutters contains 5% to 6% more cloth than was used with heavily filled plain finishes.

But the fact remains that resin treatment has caused big and expensive swings in production and market demand. Expenditures for costly equipment and training personnel have placed a strain on many plants. Others have seen the wash-and-wears eat into their markets and were not able to meet the competition.

NAUGATUCK Lotols Ready-for-use latex compounds



Is Latex resinification discoloring your fabrics?

A Naugatuck LOTOL® may be the solution.

A LOTOL is a ready-to-use rubber or resin latex compound formulated to produce the exact results you want...on your particular application equipment and under your application conditions.

As the world's leading compounder and supplier of latex, Naugatuck is able to draw on its unexcelled experience—as well as its extensive lines of rubber and resin latices—to solve any problem concerning latex application.

Whether you employ latex compounds for sizing woven fabrics, for backing pile fabrics or tufted carpet, or for bonding curled hair, let a Naugatuck latex expert prescribe the compound that will do the best job for you...and provide the aging qualities you demand. His "prescription" will be given a LOTOL identifying number and can be "filled" at any of Naugatuck's three compounding plants strategically located at Naugatuck, Conn., Gastonia, N. C., and Los Angeles, Calif.

US RUBBER

United States Rubber

1138L Elm Street

Naugatuck Chemical Division, NAUGATUCK, CONNECTICUT

Rubber Chemicals • Synthetic Rubber • Plastics • Agricultural Chemicals • Reclaimed Rubber • Latices

BRANCHES: Akron • Boston • Gastonia, N. C. • Chicago • Los Angeles • Memphis • New York • Philadelphia • **CANADA:** Latex Div., Dominion Rubber Co., Ltd., Montreal • **CABLE:** Rubexport, N. Y.

4. STYLE SWINGS

Besides the demands on plants made by new technology, such as wash-and-wear fabrics, the normal swings in style changes and customer preference take their tolls.

Two well-remembered—and to many plants, costly—late instances were (1) sports denims and (2) the fabulous pink-and-charcoal fad.

For a few years, sports denim in light weights and pastel shades was a surging business. Then, in almost a single season, customer demand swung away from these fabrics and the denim market settled back to its historic field of work-clothing uses.

The pink-and-charcoal fad hit a wide range of apparel fabrics. For two or three seasons, demand surged up and up—and then died almost overnight. Many manufacturers of such apparel items as socks and T-shirts were left with huge stocks that had to be stripped of color and redyed.

Such rapid and violent style swings eat heavily into finishing costs. It is not uncommon for style changes to dissipate profits or even to put operations in the red for a whole season.

what's to come

The feeling in the chemical-treatment field of textiles now is one of cautious optimism, except for the smaller plants in the Paterson area. Just how genuine is the gloom that seems more or less habitual around Paterson is hard to evaluate. Certainly a little ready cash would dispel much of it.

There are good reasons for dyers and finishers in general to look to the future with confidence.

First among them, particularly in cotton printing, is the fact that a loss of 90 printing machines out of approximately 550 in place a few years back cannot help but make more work available for those now in operation.

Then there is still the steady population growth in the country, which is constantly increasing pressure on capacity.

There appears to be plenty of room for the independent plant to compete with the large vertical organizations if it keeps abreast of technological developments or, better still, takes the initiative.

There is little feeling among independent finishers that the large vertical organizations are about to corral all the business any time in the next few years. In fact, vertical organizations often farm out work to independents who are more experienced in these particular lines than are the verticals' own finishing plants.

The tendency to form huge vertical firms seems to be slowing down, so far as finishing is concerned; and there has been a simultaneous weeding out of old and obsolete plants. Both these trends brighten the picture for the independent operator who has the will to live and enough capital to keep his plant efficient and his product up to date.

But whatever the size or internal organization of a company engaged wholly or partly in finishing fabrics, three factors seem to sum up their chances for success in the future:

1. Plants must be kept modern and equipped to take advantage of any labor-saving possible.

As documented in TEXTILE WORLD last month (p. 76), opportunities for cutting costs in chemical treatment are great. A plant taking advantage of these present opportunities probably has little to worry about from competition by obsolete plants.

2. More-stable pricing policies should be followed.

There may be little hope for the smaller plants with insufficient working capital to take a firm stand on price vs. cost; but most of the larger, better-organized plants can do so.

Some of them already follow this sound business principle. As one large Southern bleachery put it: "We simply will not take business if we can't make money on it. We've stuck to that principle for nearly 70 years, and it has paid off every year."

3. Wherever practicable, sound merchandising principles should be used to move goods and services.

Probably the classic example of good promotion paying off in competitive standing is the cotton promotion spearheaded by the National Cotton Council. It had a big hand, along with research and styling, in rejuvenating many cotton uses.

Many textile companies have profited by good merchandising of brand products and company services. In late years, many of the old, famous names are still in existence only because of their market value, developed over the years through quality, service, and smart merchandising.

Humanics—*A TW Brief*

Outside Interference Causes Strained Relations

Ben Stroup was a good cloth-room overseer. He could look at a cut of seconds and tell what was wrong with the loom that wove it. This ability was due to the years he had spent as a loomfixer and weave-room second hand before transferring to the cloth room.

A hard worker, Ben did everything possible not only to find cloth defects but also to prevent them. In his zeal, he would often take a swatch containing some defect to the weave room and locate the loom responsible.

Soon weavers and loomfixers were complaining that Ben was stopping their looms and telling them what to do. The matter was brought to the attention of the weave-room overseer, and he got into an argument with Ben about it.

The superintendent finally had to intervene and outline a plan for the cloth room to notify the weave room when a loom was producing seconds. The appropriate weave-room supervisors and personnel would then stop the loom and decide what was to be done.

When the situation was explained to Ben, he saw where he had been at fault. His desire to help produce better cloth had blinded his judgment.

"I was trying to be helpful," Ben said, "but I can see now where I was wrong. If the weave-room overseer had come out here stopping machinery and telling my employees what to do, I guess I'd have blown my top."

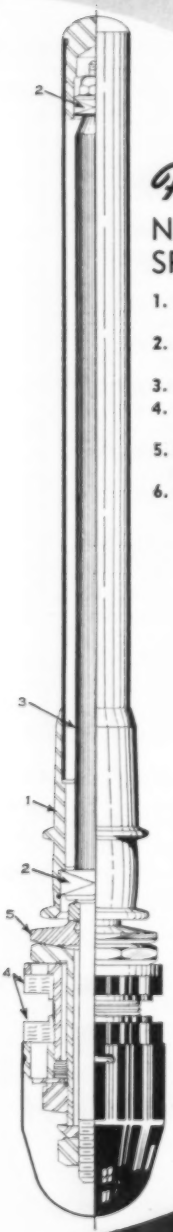
12 GOOD REASONS WHY

SACO-LOWELL SPINDLES help you make more money!

For Warp

NEW ERA SPINDLES

1. Doubles the conventional load carrying capacity.
2. Extends lubricating cycles from two weeks to 3-5 years.
3. Eliminates yarn spoilage by oil.
4. Increases tape life from 3 to 5 times.
5. Eliminates vibration that causes weak uneven yarn.
6. Reduces power consumption as much as 25%.



1—REVOLVING MEMBER
2—BALL BEARINGS
3—STATIONARY CENTER SHAFT
4—RUBBER MOUNTING
5—PLUMBING DEVICE

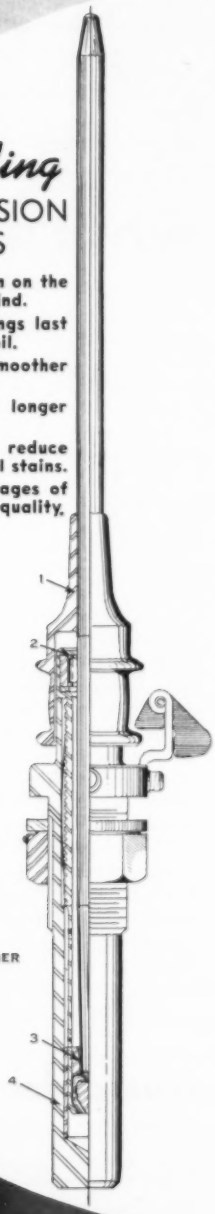
U.S. Pat No's 2,241,140; 2,289,903; 2,304,370; 2,497,834.

For Filling

TOP SUSPENSION SPINDLES

1. 2½% to 7½% more yarn on the bobbin due to tighter wind.
2. Anti-friction roller bearings last longer and require less oil.
3. Save power due to smoother operation.
4. Save labor costs with longer lubrication cycles.
5. Increase tape life and reduce spoilage of yarn due to oil stains.
6. Uniform tension at all stages of the doff improves yarn quality.

1—REVOLVING MEMBER
2—ROLLER BEARING BOLSTER
3—STEP BEARING
4—BASE



THE END RESULTS:

1. HIGHER SPEEDS WITH GREATER PRODUCTION.
2. MORE YARN ON THE PACKAGE.
3. HIGHER FRAME EFFICIENCY.

Mean $$$ in Profit

IT'S TIME FOR YOU TO ORDER SACO-LOWELL SPINDLES!

SACO-LOWELL SHOPS

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD & SACO, MAINE; SANFORD, N.C.; EASLEY, S.C. Sales Offices: CHARLOTTE · GREENSBORO · GREENVILLE · ATLANTA

For more data, circle A-50 on Reader Service Card

The Art of Discipline

- Do you think in terms of punishment when an employee gets out of line? Or do you regard discipline as a means of developing individual workers and also producing an efficient operation?
- Here are some considerations to keep in mind when disciplinary measures become necessary.

By **M. A. CROSS,** Director of Industrial Relations, Dan River Mills, Inc.

One of the top names in the advertising world has proclaimed in very vigorous language that we are living in the age of "the great goof-off." He believes that too many people expect too much from too little of their own efforts and that in the U. S. today too many of our citizens are content just getting by, are satisfied with minimal effort, and are slipshod in their performance on the job. He is concerned that the sense of pride that nourishes quality of product has faded at least temporarily.

This is a sweeping generalization. While individual cases can be cited to give the lie to it, it contains enough truth to represent a valid indictment of the attitude of a large segment of our population. It should give us cause for concern and should impel us to re-examine our own areas of influence, whether they are in the shop, in the community, or in the home.

In particular, it should raise the question as to whether or not we have established in our departments a level of discipline that works in the interests of both employees and the company. Stated another way, does the status of discipline encourage the development of individual workers and also produce an efficient operation?

Employees Prefer Reasonable Discipline

There are two fundamentals on which I hope we can reach agreement. First, it is my observation that most workers prefer a department in which reasonable discipline prevails—a taut ship, if you want to use the naval term. In such a department there is order, sensible procedure, a knowledge of what is to be expected, an absence of confusion. In my judgment, most employees want this kind of atmosphere in which to work. It does not happen if discipline is absent, erratic, or neglected.

Second, the principal purpose to be accomplished by discipline is not merely punishment. Rather, punishment may be the means in individual cases to get at the real objective—a better attitude, a keener understanding, and above all, an improved performance by the individual employee. This thought is not new, but it happens on occasion that a supervisor faced with a disciplinary problem becomes so preoccupied with figuring out an appropriate punishment and defending his action that he loses sight of his primary purpose.

If we can agree on these two fundamentals, what are some of the considerations to keep in mind when disciplinary measures become necessary, as inevitably they will?

1. Discipline Is Your Responsibility

The day you became a supervisor, you took on this obligation. If you are a good supervisor, you can't unload it or dodge it. Sure, you can get help and counsel. You can review specific problems with your associates, you can discuss them with your superior (and in some situations may be required to do so as a part of sound company policy), and you can examine possible courses of action with a representative of the personnel department. But you are the responsible party and you will be judged, by your superiors and by your employees as well, as to the wisdom of your disciplinary actions.

It is completely right that discipline should be your responsibility. You are closest to the facts, you know the circumstances involved, you know the conditions that have led to the need for disciplinary action.

Still more important, you know the individual employees and how they respond. You will know, for example, that with a certain worker, a suggestion will be enough to clear up the problem, whereas with another, a pretty stiff reprimand will be required. Understanding of the employee's reaction and response to a disciplinary measure is an essential; and as supervisor, you are most likely to possess this knowledge.

2. Get the Facts Before You Act

As a matter of simple justice, you must have a pretty good grasp of the facts before you discipline an employee. Jumping to conclusions and acting hastily have tricked many a supervisor into an unwise disciplinary action. The same culprits, in organized plants where a union can demand arbitration, have frequently demolished the company's position in arbitration and resulted in a lost case.

Getting the facts requires hearing the employee's story. Why did he commit the particular offense or mistake? Did he know what he was supposed to do? Were his instructions clear? How has his past record been in this

CONTINUED ON PAGE 150

THIS IS NO. 130 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

HOW TO PREVENT STITCHES (Roto-Coner® Winder)

Stitches on the ends of a cone usually result from a maladjustment, an accumulation of lint, or a worn part. When stitches, or "cobwebs" as they are sometimes called, occur, the winding machine should be inspected to see if the cone holder is set incorrectly, if lint has accumulated between tension discs, if a builder pin is worn, or if the supply bracket is improperly located.

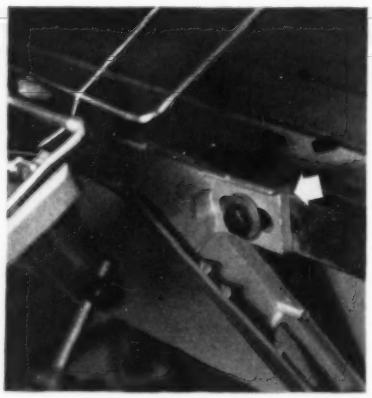


Fig. 1

This issue of "Getting the Most from Winding" discusses only the adjustment of the supply bracket to prevent stitches, since, in the past, little has been said about this particular adjustment, while the others have been discussed several times.

A screw attaches the supply bracket in one of two holes in the tension bracket bar (as shown in Fig. 1). For parallel tubing using a uniform traverse, the bracket is attached to the tension bracket bar with the screw in the right hand hole; for coning, using an accelerated traverse, the left hand hole is used (as shown in Fig. 1).

An elongated screw hole in the supply bracket provides a means of adjusting it on the bar. Its lateral location in relation to the rotary traverse is important, for if the supply bracket is located too far to the right or left it may cause the yarn to jump from the groove at the end of the traverse and create stitches. This condition is most likely to occur at the nose of the cone when the supply bracket is too far right.

The adjustment to correct this condition is best made with yarn running on the spindle, so that you can notice when it begins traversing properly. It is an easy adjustment to make although some fixers mistakenly loosen the screw in the bracket too much and thus make it difficult to move the bracket only the slight amount needed; usually all that is required is about 1/32″ or less.

The correct way is to loosen the screw only enough to allow the bracket to be tapped into position with a wrench (as shown in Fig. 2). There is a lip on the bracket (arrow, Fig. 1) which aligns it with the rotary traverse. It is important to see that this lip contacts the bar squarely after the adjustment is made.

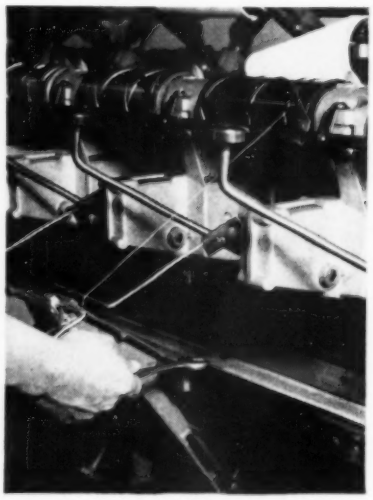


Fig. 2

Whenever the Roto-Coner is changed over from parallel tubing to coning, the supply bracket should be switched from the right to left hand hole. The final adjustment should be made in the same manner described above; that is, the screw should be tightened only enough to allow some movement of the bracket, which should then be tapped into position with the spindle running.

November 1958 — 23.8.11

Winding and Twisting Machinery for Natural and Synthetic Yarns

UNIVERSAL WINDING COMPANY

LEESONA®

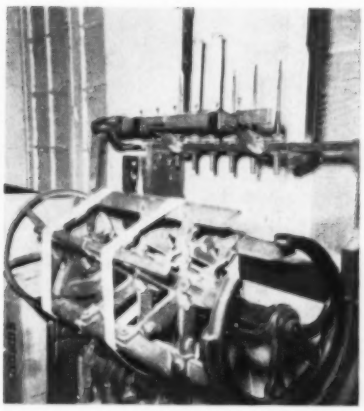
Providence • Boston • Philadelphia • Charlotte • Atlanta • Los Angeles • Montreal, Hamilton, Canada
Manchester, England • Paris, France • Basle, Switzerland

For more data, circle A-51 on Reader Service Card

Old Reel Helps Salvage 200 Lbs. of Yarn per Month

We are saving about 200 lbs. of good yarn per month that used to go into waste. This saving is made with the help of an old reel that we cut down to six spindles.

Before we started using this reel, just a little dirt on the outside of a bobbin would make the yarn unusable. But by pulling off a few layers of dirty yarn with the reel, we are saving at least 8 of the 12 oz. of yarn on each bobbin.



The reel shown in the photograph was cut down from 50 spindles to its present size. We removed the foot end, cut the parts down, and installed a ½-hp. motor with a push-button switch.

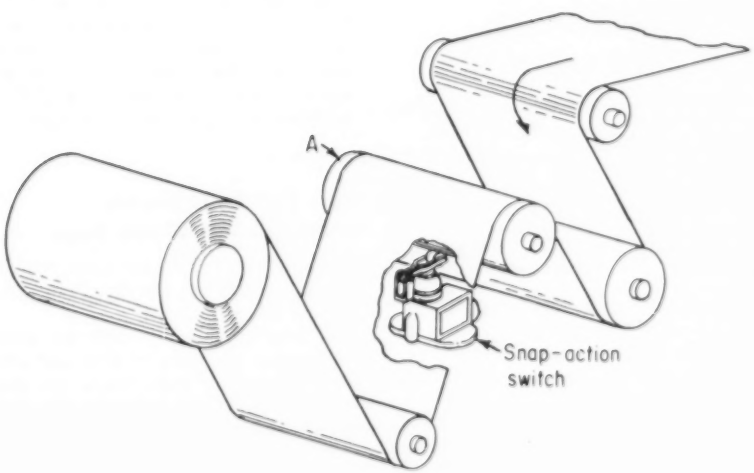
The bobbins are located at eye level. This arrangement plus good lighting makes it easy for the operator to see the bad yarn as it runs off. The skeins of dirty yarn make good waste for oilers and fixers, or the yarn can be sold as seconds on cones and tubes.

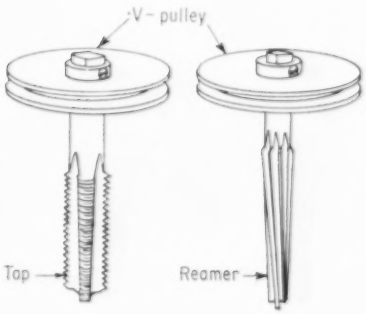
We decided to cut the reel down to six spindles (3x4½ ft.) because at the time we were running six numbers. The reel can be cut off at any point, however, to suit local requirements. It is not necessary to give too many details on how to cut the reel down to size; any good mechanic can see how simple the job is. (K-3969) *Kirby A. Wright, Edenton, N. C.*

Snap-Action Switch Stops Windups

A snap-action switch mounted as shown will prevent serious damage if the batcher drive fails or if the operator neglects to adjust tension as the roll builds up.

If the goods run slack, they tend to wrap around roll A. But when the snap-action switch is depressed by the excess fabric, it shuts down the range before serious damage occurs. (K-4055) *Micro-Tips, Minneapolis-Honeywell Regulator Co.*





V-Pulley Handle Lets You Tap Holes in Metal Quickly

Tapping a lot of holes in metal with a T-handle tap is drudgery. But this tapping can be done easily and quickly if you use a V-pulley for a handle instead of the T-pin. Use a pulley that fits snugly into the palm of your hand.

Remove the T-pin and fasten the pulley on the tap stock with the pulley setscrew.

With this arrangement, you can spin the tap much of the time, especially when the tap is to be removed. But you must be careful to keep the tool balanced or the additional leverage of the pulley will break the tap.

This same method can be used to ream holes. (K-3818)

Colored Disks Control Cross-Wound Bobbin Size

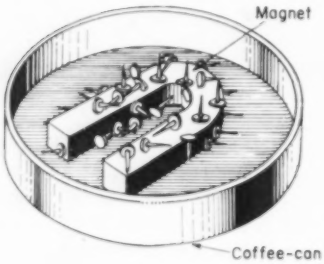
In making cross-wound bobbins for pressure dyeing, it is important that all the bobbins be wound the same diameter and weight.

Our winder was fitted with small pivoted feelers that started to revolve when the surface of the bobbin reached the feeler. It was difficult for the operator to keep an eye on these feelers since she had a large number of spindles to tend. The result was that we had a variation of 80 grams in 400-gram bobbins.

We discarded the feelers and fitted two-color disks in their place. Now it is far easier for the operator to see when a bobbin reaches full size, and the spindles are stopped quicker. Our variation dropped from 80 to 20 grams after we made the change. (K-4020) *Mauno Heiskari, Tampere, Finland*

Magnet Holds Tacks or Brads for Quick and Easy Removal

Small tacks or brads are difficult to remove from a container one at a time. But by using a high-strength magnet in the tack container, you can pick up tacks easily.



Place a handful of tacks in a flat tin lid, such as a coffee-can top. Then put the magnet in the can. The magnet will position the tacks on its top surface. Then you can pull off a single tack without looking.

This method is especially good when you're working from a step-ladder because the weight of the magnet keeps the container of tacks from falling off. (K-3756) *Charles H. Willey, Penacook, N. H.*

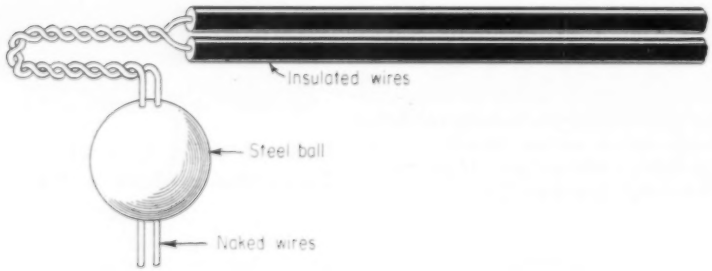
Steel Ball Is a Good Tool for Splicing Electric Wires

The easiest and quickest way to make a splice for an electric wire is with an iron ball. Use a ball 2¼ ins. in diameter; drill two ⅛-in. holes side by side through the ball near the center.

Cut about 4 ins. of insulation from the ends of the two wires to be spliced. Run the two naked ends of the wires through the holes in the ball to within 1 in. of the insulation. Then turn the ball to twist the wires toward the end of the wire until only ½ in. of wire protrudes through the ball.

Next double the twisted wire over itself 1¼ ins. Completely twist the ends of the wires around the section of the two wires near the insulation. Finally wrap the splice with tape.

The resulting splice acts as a spring to resist shock from pulls, and it will break before it comes loose. (K-3816) *H. J. Haas, Martinsburg, W. Va.*



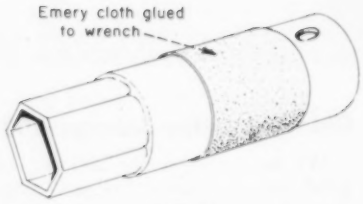


Fig 1.

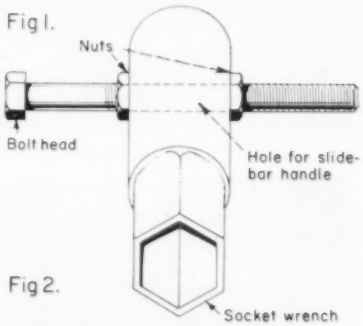


Fig 2.

Here Are Two Easy Ways To Tighten Machine Nuts

When nuts are being removed or replaced at bolts for machinery, a nut is often too tight to be turned with your fingers. Where the nuts and bolts are old, they are especially hard to turn. If you use a wrench on the nuts, the job is very slow.

You can speed the job if you glue a strip of emery cloth around a box-socket wrench as shown in Fig. 1. The emery cloth gives you enough grip to turn the nut by hand.

For tighter nuts, replace the usual slide-bar handle in the box-socket wrench with a bolt as shown in Fig. 2. Use a bolt that will just clear the hole in the wrench for the slide-bar handle and thread the bolt about two-thirds its length.

Screw a nut all the way down on the rethreaded bolt, and place the bolt through the hole in the wrench. Then run another nut on the bolt finger-tight. The bolt gives good leverage and is easy to handle. (K-3752) *A. Sharrock, Lancashire, England*

Best-Kink Award for September

Each month TEXTILE WORLD awards $25 to the submitter of the Kink judged by a panel of over 300 practical mill men as the best for that particular month. A new batch of Kinks appears each month, and a new group of readers acts as judges each month. If you are asked to judge one of these days, be sure to help select the best Kink by sending back your answer in time for final tabulation. Closing date for judging is the last day of the month in which the Kink appears.

The best Kink for September, according to TEXTILE WORLD reader-judges, was:

"Stop Motion Cuts Roving When Yarn Breaks"

By W. N. Poe, Talladega, Ala.

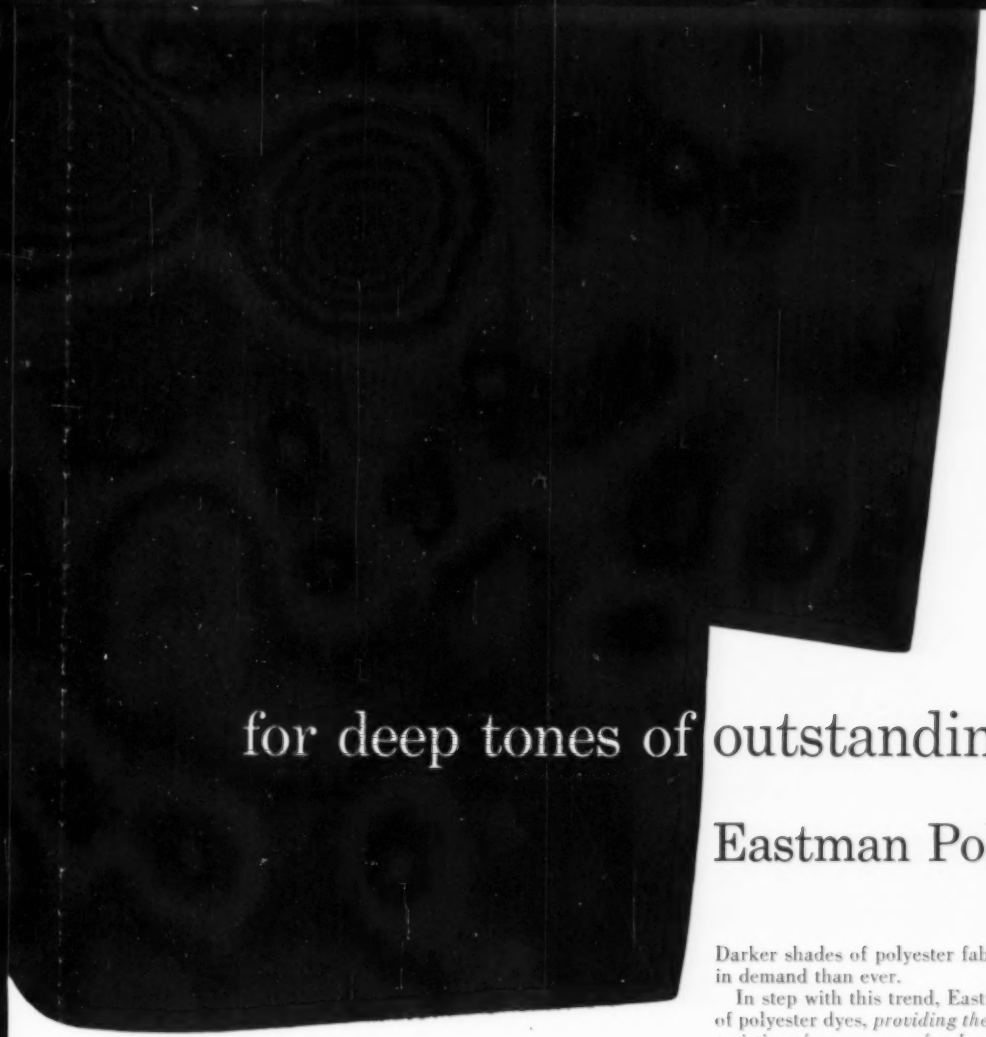
Mr. Poe is being sent a check for $25 with the compliments of TEXTILE WORLD.

You Can Save Money With Colored Waste Bags

The price received for waste in textile mills depends on the fiber, the type of material, and the color.

If bags of different colors are used to separate the types of fiber and colored waste from white waste, you can save money. Light colors should also be separated from dark colors. (K-3802) *Ben Singer, Raleigh, N. C.*

For more data, circle A-52 on Reader Service Card



*Dark Navy**

for deep tones of outstanding fastness

Eastman Polyester Dyes

Darker shades of polyester fabrics and their blends are more in demand than ever.

In step with this trend, Eastman offers an expanding series of polyester dyes, *providing the best all round fastness characteristics of any group of polyester dyes currently available.*

Specifically developed for use with polyester fibers, Eastman Polyester Dyes exhibit outstanding fastness to washing, light, sublimation, crocking, perspiration, dry cleaning and wet pressing.

Equally important are their excellent processing characteristics... good build-up, good exhaustion and outstanding leveling properties. Thus, darker shades of navy, brown and grey are economically obtained.

Dyeing with Eastman Polyester Dyes is easily accomplished with carriers or under pressure at elevated temperatures. Fibers can be readily dyed in tow, tops, stock, or fabric forms. Fabrics of polyester filament can be conveniently dyed in jigs. Fabrics woven of spun polyester yarns alone or blended with cotton, viscose or wool can be easily dyed in dye-becks.

Make sure you are taking full advantage of this outstanding line of polyester dyes.

Eastman Polyester Yellow RL
Eastman Polyester Yellow W
Eastman Polyester Yellow 5R
Eastman Polyester Orange 3RLN
Eastman Polyester Pink RL
Eastman Polyester Red B
Eastman Polyester Red 2G
Eastman Polyester Dark Red FL
Eastman Polyester Blue GR
Eastman Polyester Blue GLF
Eastman Polyester Blue BLF
Eastman Polyester Blue 3RL
Eastman Polyester Navy G
Eastman Polyester Black RB

*Try this formula on your next dark navy dye lot.

4% Eastman Polyester Blue 3RL
6% Eastman Polyester Blue BLF
0.6% Eastman Polyester Orange 3RLN
5 g./l. o-phenyl phenol type carrier
Material: Polyester
Bath Ratio: 30:1
Dyed at Boil

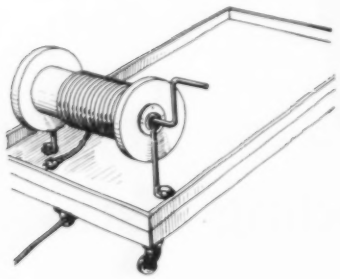
Eastman Polyester Dyes

Eastman Polyester Dyes are sold in the United States by **EASTMAN CHEMICAL PRODUCTS, INC.**, subsidiary of EASTMAN KODAK COMPANY, in Kingsport, Tennessee; Lodi, New Jersey; and Greensboro, North Carolina. On the **West Coast** through WILSON MEYER CO., San Francisco, Los Angeles, Portland, Seattle, Salt Lake City. In **Canada** through CLOUGH DYESTUFF CO., LTD., St. Laurent, P.Q.

Old Yarn Spool Makes Reel for Electric Cords

When an electrician or shop mechanic does extensive work in mill production departments, he usually carries his tools and supplies on a small truck. But electric extension cords for portable drills and other small tools are thrown haphazardly on the truck; as a result, the cords are always tangled and are sometimes damaged.

At our mill, we recently made a small reel for extension cords and bolted it to the repair-parts truck. The reel is made from a discarded yarn spool and a few parts from the machine-shop stock room.



A rod is threaded on one end for two nuts, and the other end is bent to form a crank as shown in the accompanying sketch; the over-all rod is used as a combination axle and crank.

Two axle supports are made from rods; each rod is bent at its two ends to make eyes. These supports are bolted to the truck.

The reel is assembled by inserting the axle through the axle supports and the bore of the spool. Then two nuts are locked together on the threaded section of the axle to hold the axle in place.

Now to store an extension cord safely, we wind it on the reel by turning the handle. (K-3591) *H. J. Haas, Martinsburg, W. Va.*

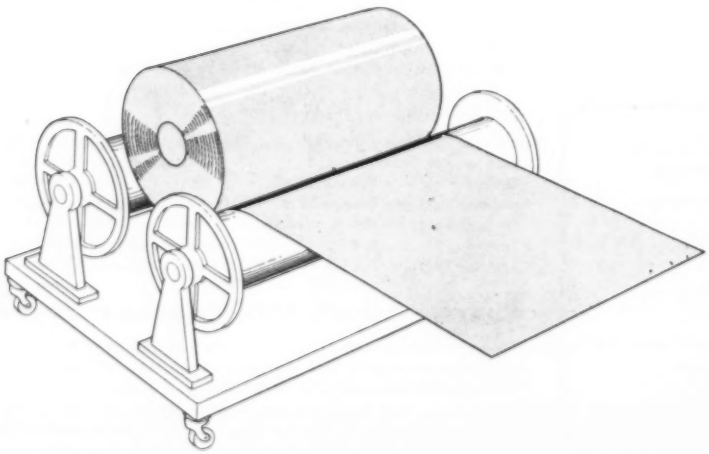
Four Bolts Change Your Vise Into a Pipe Vise for Rods

If you need to tighten or untighten a nut from a rod and don't have a pipe vise, you can do the job easily in a machinist's vise.

Put two machine bolts on each side of the rod, and then fasten the vise firmly against the bolts. The threads of the bolts clamp the rod like a pipe vise and keep the rod from turning. You can also thread pipe or put on and remove pipe fittings in this same way. (K-3541)

Cloth-Roll Dolly Permits Quick Inspection

Cloth can be inspected right off the loom by means of a portable dolly that can be used when the usual inspection machines are fully occupied. Spare loom beams, used to form a cradle for the roll of cloth, are suitably mounted on a flat truck as shown. (K-3962)



Wood Guide on Plane Assures Square-Cut Board Edges

When you plane the edges of boards with a hand plane, you can be sure the edges are square if you use a rabbeted piece of hardwood as a guide.

Use a seasoned piece of hardwood to avoid warping. Cut the hardwood the length of your plane. Rabbet the wood $\frac{1}{8}$ in. on the side of the board, and extend the rabbet $\frac{3}{4}$ in. down the side.

To use the guide, set your plane at the top edge of the rabbeted surface. Fasten the plane to the guide with a C-clamp. Place the C-clamp just in front of the throat of the plane to prevent the throat from choking with shavings.

After you clamp the guide in position the first time, test the tool for squareness by placing a metal square against the bottom of the plane and the part of the guide extending below the plane. (K-4002) *Walter A. Simond, Washington, D. C.*

How To Run Off Yarn From Damaged Cones

Yarn cones are sometimes shipped on damaged cones, or the cones get damaged in shipment. Much trouble is encountered when the yarn is run off on a winder or knitting machine.

To stop the yarn from snagging on the damaged tip, sand the tip and take a disk from a disk-type tension and place it over the tip of the cone.

Don't touch the yarn; place the cone on the lower pin of the creel in the quilling department. On some machines, a small bolt will have to be inserted in the end of the disk to hold it on the cone. (K-3911) *Joseph Sewesky, Berwick, Pa.*

...with the SOLVAY Activated Hydrogen Peroxide Bleaching Process for Cotton

By using the SOLVAY Activated Hydrogen Peroxide Bleaching Process for Cotton, you can save up to 50% in bleaching chemical costs and, at the same time, gain a number of measurable advantages.

You get whiteness that equals or surpasses the results you're now getting. You increase purity, reduce color reversion tendencies and ash and metals content, and raise absorbency rates—even with moderately hard water —and without harm to the cloth.

This method has been thoroughly tested and is now in successful use in full-scale commercial operation. Application for a patent covering the SOLVAY Activated Hydrogen Peroxide Bleaching Process has been filed. The process is available to bleachers under a royalty-free license.

Write now! Full details of process, techniques, results!

Sodium Nitrite • Calcium Chloride • Chlorine • Caustic Soda • Caustic Potash Chloroform • Potassium Carbonate • Sodium Bicarbonate • Vinyl Chloride • Methyl Chloride • Ammonium Chloride • Methylene Chloride • Monochlorobenzene Soda Ash • Para-dichlorobenzene • Ortho-dichlorobenzene • Carbon Tetrachloride Ammonium Bicarbonate • Snowflake® Crystals • Aluminum Chloride • Cleaning Compounds • Hydrogen Peroxide • Mutual Chromium Chemicals

Allied Chemical

SOLVAY PROCESS DIVISION
61 Broadway, New York 6, N. Y.

SOLVAY branch offices and dealers are located in major centers from coast to coast.

SOLVAY PROCESS DIVISION
61 Broadway, New York 6, N.Y.

☐ Please send me without cost your brochure, "SOLVAY Activated Hydrogen Peroxide Bleaching Process for Cotton."

☐ Have one of your representatives call to discuss it.

Name_____

Position_____

Company_____

Phone_____

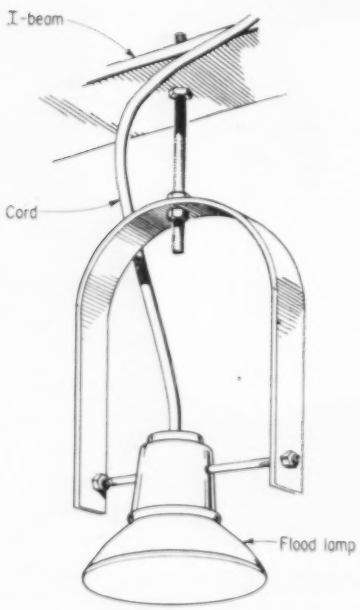
Address_____

City_____ Zone____ State_____

BW-118

Homemade Floodlight Fixture Keeps Lights to a Minimum

Goods are loaded and unloaded at our shipping department during the entire 24-hr. day. So that truckers can see to load and unload with a minimum of light fixtures, we use homemade fixtures that can be turned to any position.



A fixture is made from a strip of strap iron and two bolts. The strap iron is 20 ins. long and 1½ ins. wide. The bolts are 6 ins. long and ¼ in. in diameter, and they are threaded full length.

Three ¼-in. holes are drilled and tapped in the strap iron: a hole is 1 in. from each end and the third is in the center. The strap is bent to make a U-shape bracket as shown in the accompanying sketch.

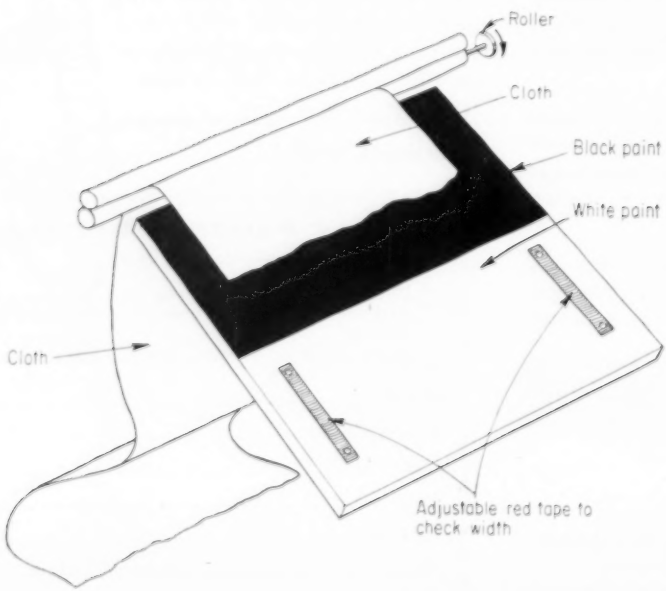
To assemble the fixture, we drill a hole in a floodlight socket and bolt it in the center of the open end of the strap-iron bracket. Then the center of the bracket is suspended from a building I-beam with the other bolt.

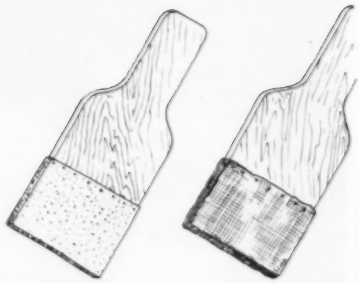
All nuts on the bolts are tightened just enough to hold the parts firmly. But the bracket can be turned by hand to any angle desired; the lamp socket can also be tilted. (K-3961)

Black and White Backgrounds Improve Inspection Board

We are able to detect more fabric defects since we painted our inspection boards so that both black and white areas lie under the cloth. We also use adjustable paper tapes made of gummed paper to check the width of the cloth that is being inspected, as shown in the sketch.

These changes have made our inspection operation much more efficient. (K-4013) *Hokao, Fukaya, Fukui-ken, Japan*





Loom Clutches Are Cleaned With These Thin Paddles

Sometimes oil accumulates on the clutch segments of C&K MP looms and causes them to slip. Some loom-fixers tighten the screws to overcome the slippage, but removal of the oil is the correct procedure.

If two paddles about 3 ins. wide, 6 to 8 ins. long, and about ⅛ in. thick are made, they can be used to clean the clutch segments without disassembling the clutch.

One of the paddles should be covered with felt so solvent can be applied to the clutch segments with it. A facing of sandpaper should be glued or tacked to the other paddle. With these two paddles, the clutch segments can be cleaned and refaced easily. (K-3725)

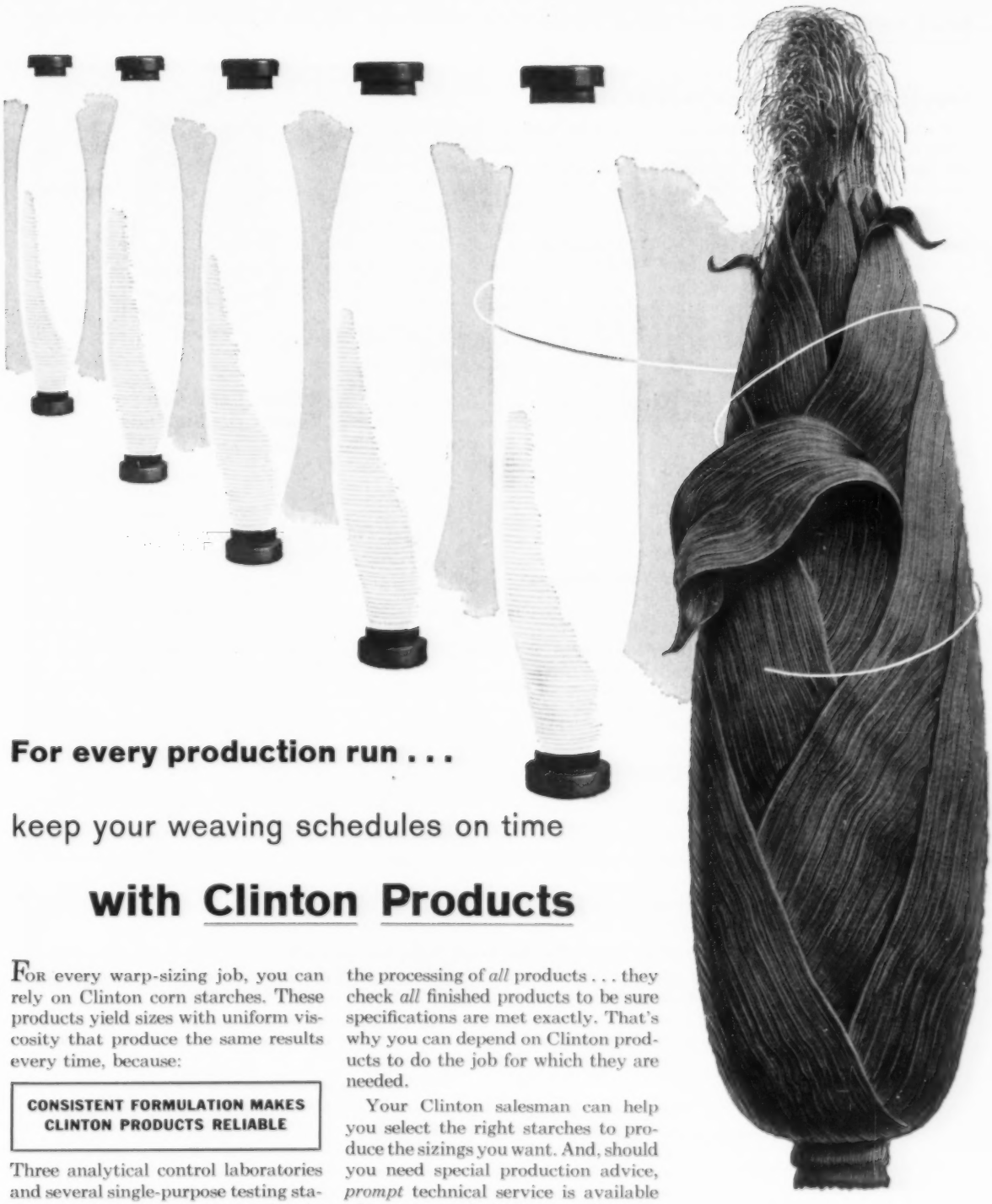
Hacksaw Blade Makes Knife For Skiving Electric Wires

An electrician usually uses a pocket knife to peel off and scrape the ends of electric wires to make connections. But a knife becomes dull quickly and has to be resharpened frequently.

A knife made from a hacksaw blade prepares wire for connections better than a pocket knife, and it never has to be sharpened.

To make the knife, cut a piece of hacksaw blade 5 to 6 ins. long. Place a small piece of hardwood ¼ in. thick and 3 ins. long on each side of one end of the blade. Bore the handles and blade for two brads to fasten the tool together. Then shape the hardwood handles smooth on a sanding belt.

The tool should be carried in a pouch for protection. Make several of the knives at once so that you'll have at least one for your portable tool kit and one for your workbench. (K-3545)



For every production run . . .

keep your weaving schedules on time

with Clinton Products

For every warp-sizing job, you can rely on Clinton corn starches. These products yield sizes with uniform viscosity that produce the same results every time, because:

CONSISTENT FORMULATION MAKES CLINTON PRODUCTS RELIABLE

Three analytical control laboratories and several single-purpose testing stations are located at strategic points in our plant. They check every stage in the processing of *all* products . . . they check *all* finished products to be sure specifications are met exactly. That's why you can depend on Clinton products to do the job for which they are needed.

Your Clinton salesman can help you select the right starches to produce the sizings you want. And, should you need special production advice, *prompt* technical service is available when you need it. Call your Clinton salesman today, or write:

CLINTON CORN PROCESSING COMPANY
CLINTON, IOWA

CLINTON

. . . Where research today improves tomorrow's product

For more data, circle A-54 on Reader Service Card

Copper or Brass Tool Puts Belts on Pulleys

Putting a tight belt on a pulley can often be a hard job; the job is especially hard if the pulley is in an awkward position so that you have to stand on a ladder.

But the simple tool shown in the accompanying sketch runs a belt on a pulley by itself. The tool is made from a small copper or brass rod; this material is used so that the belt or pulley will not be damaged.

A short hook is bent on one end of the rod as shown at *A* in the sketch. Then a longer hook is formed at *B*. The over-all length of the tool is determined by the width of the pulley; the tool between points *A* and *B* is equal to the pulley width.

To put a belt on a pulley, hook *B* is positioned under the belt on the edge away from the pulley. Then hook *A* is fastened to the edge of the pulley opposite the belt.

You turn the pulley a small amount, and the belt is pulled into running position. Since the metal of the tool is soft, hook *A* flattens out to some extent so that the tool is removed easily, even with the belt running. (K-4007)

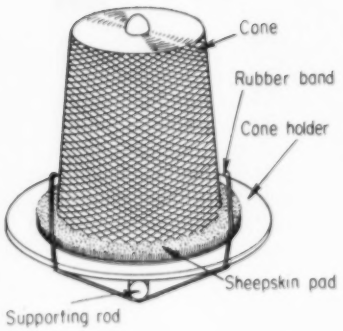
W. E. Warner, Essex, England

Rubber Collars on Vise Protect Your Fingers

A vise handle has to slip freely through the shaft if it is to be used at top speed; but the ends of the handle often nip your fingers.

You can have a fast-acting vise and also protect your fingers if you use a sponge-rubber collar next to each end of the handle. Make the collars ½ in. thick and 1 in. in diameter; cut a hole in the center of each collar the size of the handle. Then split the collar from the center through the outside edge.

To use the collars, slip them over each end of the handle against the knobs. Then bind the outside circumference of the collars tightly with cellophane tape. (K-3817)



Rubber Band Can Reduce Double Ends

Where filament yarns are magazine creeled on sheepskin pads, double ends are often caused by the tail becoming loose and catching in the running end because the sheepskin holder vibrates on the creel pin.

These double ends can be reduced by stretching a rubber band across the top of the sheepskin holder and pulling it down around the bar that supports the creel pin and holder.

Anchor the rubber band over the opposite side of the sheepskin holder. The band will keep the sheepskin taut, and the tail will be kept in place until transfer time. (K-4000) *J. Scwesky, Berwick, Pa.*

$500 for Best Kink in 1958 - - - $25 for Best Kink Each Month

Plus $5 to $10 for Every Kink Accepted

What Is a Kink?

Any idea that will

- Cut costs
- Improve quality
- Reduce work
- Increase production
- Make work easier

The idea may be one for improving machines, some attachment for a machine, a short-cut way of doing something, a labor-saving device—any idea at all that helps a mill man run his job better or easier.

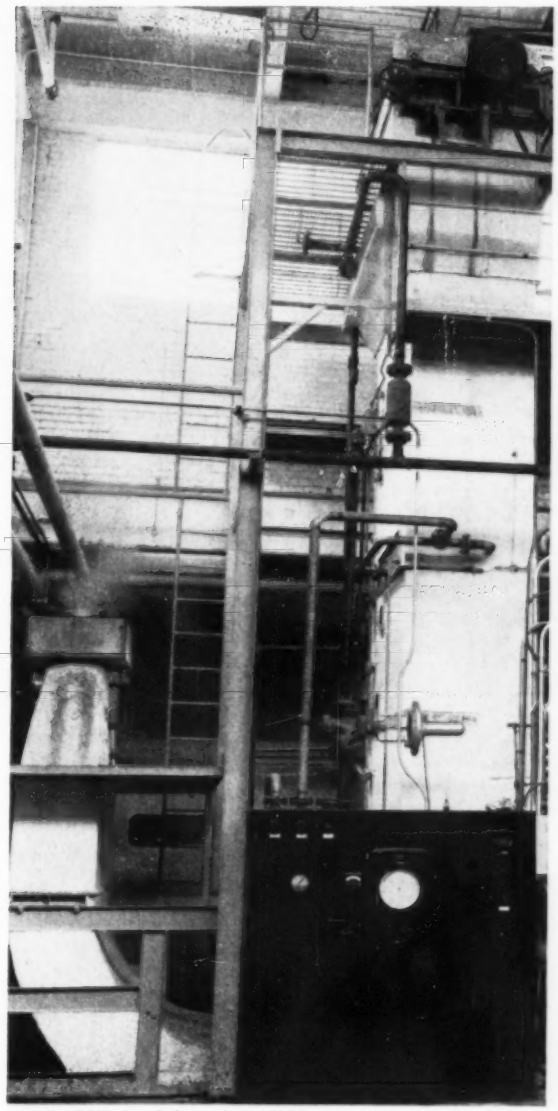
Send in your Kink now. There is always a contest going on.

RULES OF CONTEST

1. No limit to number of entries.
2. New $25 prize contest every month, $500 prize contest for the year. Monthly contest confined to Kinks published that month, yearly to those published in calendar year 1958.
3. All Kinks paid for on acceptance; extra payment for photographs. Drawings need not be finished (clear detailed pencil sketches will do).
4. Previously published material not eligible for prizes.
5. Unless you advise to contrary, we assume we may sign your name to Kink when published.
6. Prize winners will be selected by readers, a different group each time. At least 300 will be asked to select preferred Kinks in each issue. Their votes will select the best Kinks, and their decision will be final. In case of ties, duplicate prizes will be awarded.

Send Kinks to:
KINKS CONTEST, TEXTILE WORLD
201 E. Coffee St., Greenville, S. C.

Another mill converts to the exclusive Solo-Matic Bleaching Process . . .



OLD J-BOX, already in service at Old Fort, was economically adapted to the improved Du Pont-type J-box through help and advice of a Du Pont Technical Representative.

Old Fort Finishing Co. saves floor space, improves bleaching quality of cotton broadcloth and piece goods

Now . . . over twenty-five mills are cutting costs and speeding production with the exclusive Solo-Matic Bleaching Process, available only from Du Pont!

Latest addition to the list is the Old Fort Finishing Co., Old Fort, N.C.—well-known producer of cotton broadcloth, print cloth and piece goods. Old Fort changed from 4-step caustic-chlorine batch bleaching to the simpler, more effective Du Pont Solo-Matic Process . . . cut floor space and processing time significantly. Bleaching quality improved—and with it uniformity in dyeing and finishing.

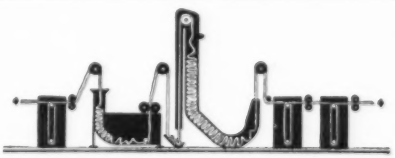
Your bleaching dollar goes further with Solo-Matic

Du Pont's Solo-Matic Process can help you save production and utilities costs as it has for so many mills. It can *double* your production in the same floor space, or maintain the same production in *half* that space with either new or existing equipment. In any case, you can count on improved brightness, fullness and uniformity in your product. Why not get all the facts about Du Pont's exclusive single-stage process? Just get in touch with your Du Pont Representative, or write us. E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Department, Wilmington 98, Delaware.

DU PONT
REG. U. S. PAT. OFF.

ALBONE® hydrogen peroxide

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*



Du Pont's Solo-Matic process—the most advanced single-stage hydrogen peroxide bleaching process available

DON'T CONFUSE THE SOLO-MATIC WITH ANY OTHER PROCESS!

Other processes may *sound* similar, but there is *only one* Solo-Matic Bleaching Process and it was developed by Du Pont. It is essentially a chemical technique that can easily be adapted to any existing or new continuous peroxide bleaching installation. The Du Pont Solo-Matic Process is helping more than twenty-five well-known mills improve bleaching quality, cut costs.

For more data, circle A-55 on Reader Service Card

QUESTIONS AND ANSWERS

Do you need help on a technical problem? TEXTILE WORLD is at your service in helping solve problems in yarn manufacturing, weaving, knitting, dyeing, finishing, and other textile operations. A large staff of mill men, consultants, and other experts are available for authoritative answers. Send your problem to the Editor, Questions and Answers, TEXTILE WORLD, 201 E. Coffee St., Greenville, S. C.

Women's Underwear Fabric Is Now Mostly Tricot

Technical Editor:

We were very much interested in the figures on women's-underwear production [TEXTILE WORLD, April, '58, p. 65]. Do these figures include garments made from nylon tricot? If so, how much nylon tricot is used? (1396)

The figures in the table do include underwear made from tricot and other warp-knitted fabrics. Here is a breakdown of fibers and fabrics used for various garments in 1956:

Panties and bloomers	
Cotton or wool circular knit	3,292,000 doz.
Nylon warp knit	5,168,000 doz.
Rayon and acetate warp knit	15,785,000 doz.
Man-made-fiber circular knit	4,766,000 doz.
Vests and undershirts	
Cotton or wool circular knit	654,000 doz.
Nylon warp knit	35,000 doz.
Rayon and acetate warp knit	350,000 doz.
Slips	
Cotton or wool circular knit	206,000 doz.
Nylon warp knit	3,247,000 doz.
Rayon and acetate warp knit	572,000 doz.
Petticoats	
Nylon warp knit	1,817,000 doz.
Rayon and acetate warp knit	221,000 doz.

Thread Twist Multipliers Depend on Staple Length

Technical Editor:

What twist multipliers are used for 40s, 50s, 60s, 70s, and 100s cotton sewing threads? (1412)

The turns per inch desired is dependent on the size of the single yarn and the staple length of the cotton. As yarns become finer, they require more twist in proportion to the square root of the yarn number.

Twist multipliers of 4.75 are generally used for sewing threads made from 1-in. cotton. Long-staple cotton fibers tend to bind themselves together better than short-staple cotton fibers, and less-than-standard twists are generally used for fibers over 1 in. and more for fibers less than 1 in.

The customary rule is to decrease the multiplier by 0.05 for every $\frac{1}{16}$ in. over 1-in. staple cotton and increase the multiplier 0.05 for every $\frac{1}{16}$ in. under 1-in. staple cotton. Many manufacturers, however, do a lot of experimenting to find out the best twist multiplier for a particular cotton and yarn.

Cotton yarns for sewing threads are usually combed, and the following staple lengths are used for the various yarn numbers:

40s to 60s—$1\frac{3}{16}$- to $1\frac{1}{4}$-in. staple
60s to 70s—$1\frac{1}{4}$- to $1\frac{3}{8}$-in. staple
70s to 80s—$1\frac{3}{8}$- to $1\frac{1}{2}$-in. staple
80s to 100s—$1\frac{1}{2}$- to $1\frac{5}{8}$-in. staple

Multipliers for ply yarns range between 1.5 and 8, but this multiplier depends on the twist in the single yarn, the number of yarns plied, and the characteristics desired in the ply yarn. When there are numerous ends plied, the twist multipliers will be in the lower range.

How Paper Yarn Is Made

Technical Editor:

How is paper yarn for weaving made, and what machines are used? (1384)

Paper yarn is made by twisting paper strips with about 4 tpi. Normal kraft paper of various weights, widths, and colors is used. Paper with fibers running lengthwise in the sheet is used because the breaking strength is four times greater than paper with fibers running widthwise.

The paper rolls are 15 to 75 ins. wide, and they are cut into strips $\frac{3}{8}$ to $1\frac{1}{2}$ ins. wide in $\frac{1}{8}$-in. increments on a slitting machine. The slitting machines have several sets of cutting disks, which are not kept sharp because a clean cut is not desired.

The cheeses of slit paper are sometimes conditioned in a bath of wax emulsion with a penetrant. This operation is sometimes done at the twisting machine.

The paper passes through a pan of wax emulsion during twisting and absorbs about 25% moisture. A solution of tannin, size, and silicate at 120° F. increases the wet strength 30% during twisting.

Twisting of fine yarns is done on ring twisters, while coarse yarns are twisted on horizontal machines. A porcelain folder below the ring twisters starts the twist in the paper strip. A weighted disk keeps the yarn in the front-roll groove as it is twisted on wooden bobbins.

Yarn diameters made range from 0.015 to 0.06 in.

Warm-Water Scouring Is Economical

Technical Editor:

Is cold-water scouring with 15 to 20% soap over the standard formula a cheaper scouring method than warm water at 90° F. with the standard amount of soap? (1413)

Warm-water scouring will be more efficient; and at a temperature of 90° F. it will be more economical than cold-water scouring with 15 to 20% more soap.

Cold-water washing is useful mostly to remove traces of chemicals from goods in process. Scouring usually involves removing a good deal more foreign matter, and heat is very helpful to good scouring.

We would suggest that unless the goods might be harmed by a higher temperature, you scour at 140 to 160° and reduce the amount of soap by small increments in trial runs until you find the smallest amount necessary to get results.

TEXTILE CHEMICALS FROM DOW

Dow Latex backs carpeting with a strong "hand"

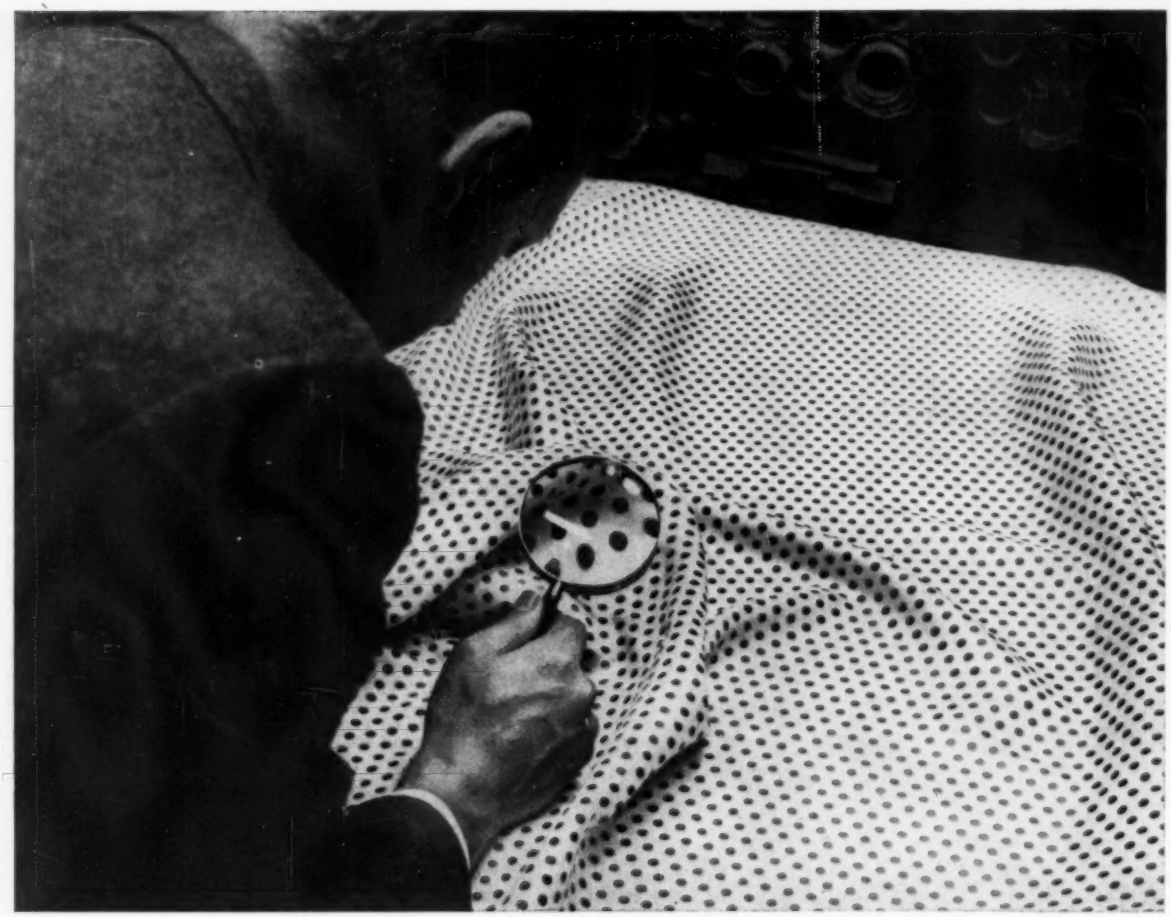
Dow Latex 529K backs up carpeting with features that clinch sales. Used in back-sizing, this high-styrene latex is unmatched for imparting a firm hand that bespeaks quality and durability. And along with this improved stiffening goes firmer anchorage of loops in tufted carpeting. Dow Latex 529K has outstanding fadeometer stability and provides backings with light color and resistance to discoloration . . . extra selling features for every unit of latex used!

Dow Latexes are improving products and cutting costs in many varied textile applications, from carpeting to wall coverings. It will pay you to bring your coating problems to Dow. Contact your nearest Dow sales office or write to THE DOW CHEMICAL COMPANY, Midland, Michigan, Coatings Sales Department 2169B-1.

LATEX

YOU CAN DEPEND ON DOW

For more data, circle A-56 on Reader Service Card



TEN-O-FILM starches and synthetics go hand in hand

Looking for a starch that's compatible with the adjuncts you use in warp sizing synthetics? Ten-O-Film is your answer. This chemically modified starch derivative was specially developed to simplify and improve processing of both the new synthetic and natural fibers.

Ten-O-Film brings new economies to sizing operations. It requires less boiling time than conventional starches: Ten-O-Film reaches stable viscosity in 30 minutes and remains stable even under prolonged heating and circulation. Desizing can be carried out more readily, hence more economical dyestuffs can be used and with greatly reduced bleeding. The clarity of Ten-O-Film sizes will not mask the bright or pastel shades so widely used in modern fabrics. In desizing, the soap boil-off may sometimes replace the enzyme desizing process.

These are only a few of the advantages of using Ten-O-Film starches. Our technical representative will give you the complete Ten-O-Film story. He has tried and tested formulations for all popular synthetic and natural fiber blends.

The technical facilities of the world's largest corn processors await your call. These facilities include laboratories devoted to continuing research in textile technology, as well as unmatched sources of firsthand textile knowledge and experience. Our technical representative will be glad to help you take advantage of these resources. For full information, call our nearest sales office or write direct.

TEN-O-FILM® starches

Fine products for the Textile Industry: CLARO® · GLOBE® EAGLE® · FOXHEAD® · TEN-O-FILM® starches · GLOBE® dextrines

CORN PRODUCTS SALES COMPANY · 17 Battery Place, New York 4, N. Y.

For more data, circle A-57 on Reader Service Card

For more data, circle A-58 on Reader Service Card→

When you need

BASIC CHEMICALS FOR TEXTILES

look to General Chemical!

Here's why...

As a leading supplier of basic textile chemicals, General Chemical has the production facilities and experience to meet your particular requirements, and meet them promptly. That's why so many industry leaders look to General for all these key process materials:

BLEACHING
Sodium Silicate
Tetrasodium Pyrophosphate
Oxalic Acid
Sodium Bisulfite, Anhydrous
Hydrochloric Acid (Muriatic)
Disodium Phosphate

CARBONIZING
Sulfuric Acid
Aluminum Chloride, Solution

DESIZING
Sulfuric Acid

RAYON MANUFACTURE
Sulfuric Acid
Hydrochloric Acid
Sodium Sulfite
Sodium Bisulfite, Anhydrous

DETERGENT
Disodium Phosphate
Trisodium Phosphate
Tetrasodium Pyrophosphate
Sodium Tripolyphosphate
Sodium Silicate
Sodium Metasilicate

DYEING
Glauber's Salt, Anhydrous
Sodium Sulfate
Acetic Acid
Sulfuric Acid
Hydrochloric Acid
Aqua Ammonia
Oxalic Acid

SOURING
Sulfuric Acid
Hydrochloric Acid
Acetic Acid

OTHER USES
Sodium Thiosulfate
Nitre Cake
Aluminum Sulfate
Ammonium Alum
Potassium (Potash) Alum
Ammonium Sulfate
Mixed Acid
Chrome Alum
Lead Acetate
Ferric Sulfate (Iron Copperas Nitrate)
Ferric Nitrate (Iron True Nitrate)

Baker & Adamson® Laboratory Reagents

Allied Chemical

Basic Chemicals for American Industry

GENERAL CHEMICAL DIVISION

40 Rector Street, New York 6, N. Y.

Offices: Albany • Atlanta • Baltimore • Birmingham • Boston • Bridgeport • Buffalo • Charlotte • Chicago • Cleveland (Miss.) • Cleveland (Ohio) • Denver Detroit • Houston • Jacksonville • Kalamazoo • Los Angeles • Milwaukee • Minneapolis • New York • Philadelphia • Pittsburgh • Portland (Ore.) • Providence San Francisco • St. Louis • Seattle • Kennewick, Vancouver and Yakima (Wash.)

No. 8 in a series—how your Du Pont salesman is backed by many sales-building activities, including Fiber Research, Technical Service, Fabric Development and Merchandising.

Has fiber facts ...does travel

Here we see Pat Crow, Du Pont retail-training specialist, in one of her "classrooms". In this instance, it's the sweater department of R. H. Macy in New York City. Her pupils are salesclerks, learning through informal talk and demonstration the special properties and latest developments in sweaters of "Orlon"* acrylic fiber.

Pat is a member of Textile Fibers Product Information Group. She and her co-workers travel up, down and around the country educating store personnel on Du Pont's family of textile fibers. Last year, for example, they conducted training programs in over 1,300 stores... personally instructed over 15,000 store personnel. And retail training is but one facet of the broad educational activities of this group, whose members also work with schools, civic and scientific groups, frequently appear on radio and television, and answer thousands of letters inquiring about Du Pont fibers every month.

The introduction, within a relatively short period of time, of man-made fibers with new properties, uses, characteristics and their many blends created the need for such an information service. To meet this need, Du Pont, in 1951, launched an educational program on its fibers. The program's purpose and scope was, and still is, unique.

The facts, attitudes and reactions reported from the field by Pat Crow and her co-workers help give Du Pont a better grasp of day-to-day retail merchandising needs. Their training assistance paves the way for more efficient and expanded selling of merchandise made with Du Pont fibers . . . contributes to increased demand, broader markets.

This is one of the ways Du Pont works to increase the market for its fibers and thus benefit its customers. It's one of the reasons why Du Pont salesmen are able to bring to their customers a range of merchandising and technical information unique in the textile industry.

From raw fibers to retail sales
...Du Pont builds profit for you

PRODUCT and PROCESS NOTES FROM DU PONT

Expanded Production of Du Pont 420 Nylon. New and expanded production facilities for Du Pont 420 nylon went into operation at Seaford, Delaware, this July. Now, with increased supply, we expect to see this fiber in a broad range of fabrics and in a wide variety of garments destined for rugged wear, such as boys' play wear and men's work clothes. This new fiber has been specially engineered to make possible outstanding abrasion resistance in such merchandise. Up to 70% greater durability is possible when the warp contains at least 25% Du Pont 420 nylon in an intimate blend with cotton. Ask your Du Pont salesman for more information about Du Pont 420 nylon.

New Binder for Non-Woven Fabrics. A new, low-melting thermoplastic binder for non-woven fabrics is now available. Known as "Dacron"** polyester fiber-binder, this new product is manufactured as uncrimped "Dacron" staple with an average denier per filament of about eight to ten. It is available in a cut length of one and a half inches. The fiber-binder makes it possible to manufacture non-woven fabrics of 100% "Dacron" which take full advantage of the fiber's excellent dimensional stability, heat resistance and good electrical properties. The fiber-binder may be blended with conventional "Dacron" staple and can be processed on such conventional web-forming equipment as carding machines, garnett cards, or air-deposition units.

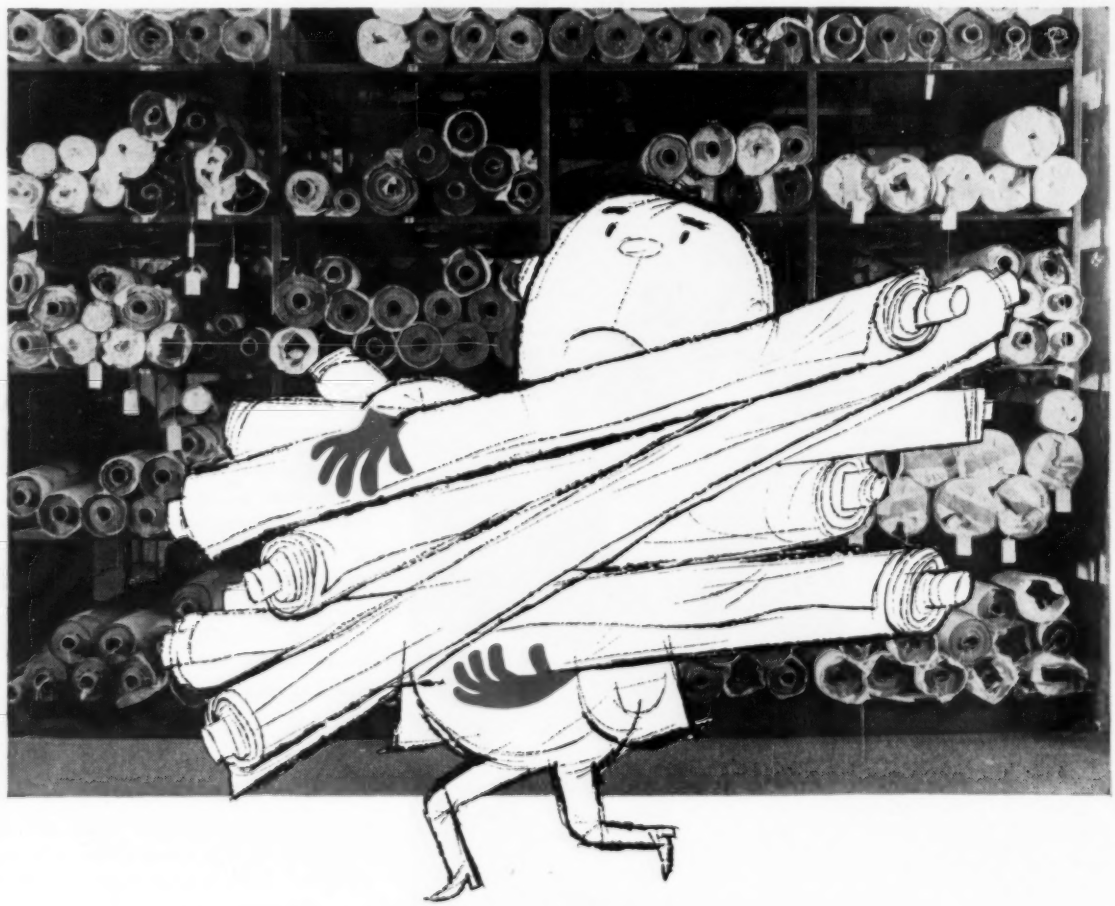
Larger Acetate Beam Packages. In line with our aim to make available advanced, economical yarn put-ups, we now have in production larger acetate beams for both knitters and weavers. For manufacturers of tricot, we have 30-inch-flange-diameter beams capable of holding over twice the yardage of 55 denier on standard 21-inch-diameter beams. For weavers, we have section beams with 36-inch-diameter flanges which make possible greater yardage and a more efficient slasher operation on standard constructions.

*"Orlon" is Du Pont's registered trademark for its acrylic fiber.
**"Dacron" is Du Pont's registered trademark for its polyester fiber.

Enjoy the "Du Pont Show of the Month" on CBS-TV

DU PONT
REG. U.S. PAT. OFF.

Better Things for Better Living
...through Chemistry



Why not stop those fabric "seconds" in the first place?

If "seconds" are taking your profits hand over fist—let's talk for a minute.

Maybe the root of your problem is the rayon yarn you're using!

You know, rayon that's processed the regular way gets handled. Actually, it gets picked up, put down, handled many, many times before it reaches your looms.

That means many chances that filaments will be broken, multiple knots made necessary, slubs formed. That means you might get yarn with such lack of uniformity that it shows up in wildly uneven dyeing . . . and shows up in the red on your ledger sheets.

Now, consider I.R.C.'s Continuous Process Rayon. Its name says it! Its process is continuous. Nobody interrupts its inch-by-inch flow from spin-bath to final wind-up. Everybody keeps hands off it. And the rayon yarn that results is as flawless and uniform as can possibly be made!

Yet it costs no more than you're paying right now!

Only one rayon-producing plant in the whole U.S.A. makes rayon yarn this way. That's I.R.C.'s far-famed Painesville, Ohio plant. We'd like to give you a guided tour, any time you say. Meanwhile, can't we lend a hand with your plant problems now?

...we really can give you a hand!

I·R·C

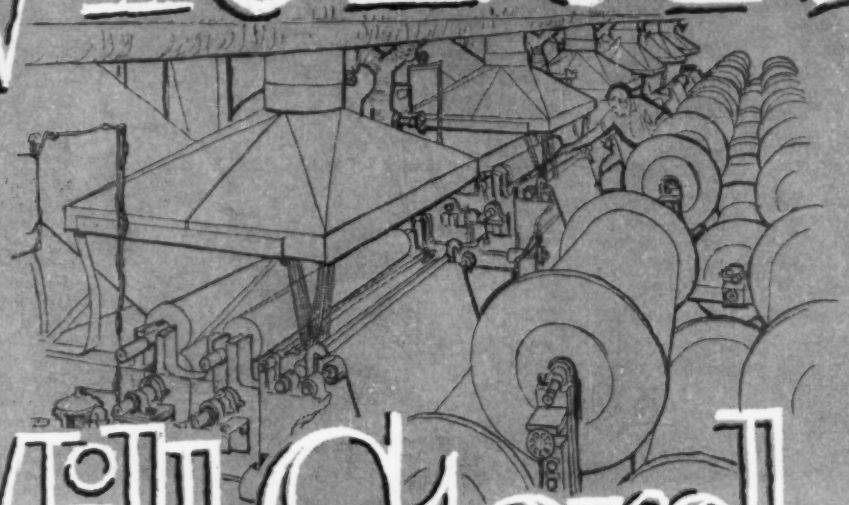
Industrial Rayon Corporation
Cleveland, Ohio

Producers of Continuous Process Rayon Yarns and Tyron[3] Cord for Tires
Sales Office: 500 Fifth Ave., New York 36, N. Y.

I. R. C. CONTINUOUS PROCESS RAYON COSTS NO MORE . . . SAVES YOU PLENTY BECAUSE IT'S PERFECT INCH BY INCH . . . UNIFORM MILE AFTER MILE!

VICTOR

A KEESTAR KEE PRODUCT



Mill Starch

Known for Uniformity
for more than 60 years.

if he's a Keever Man,
he's the Weaver's Friend

THE KEEVER STARCH CO. • General Offices • Columbus 15, Ohio

Processors of corn, wheat and blended starches for industry since 1898

Charles C. Switzer, Vice President
TEXTILE SALES DIVISION
118 SOUTH PLEASANTBURG DRIVE
GREENVILLE, SOUTH CAROLINA

For more data, circle A-61 on Reader Service Card

For more data, circle A-62 on Reader Service Card→

genacryl®

dyes for acrylics—nothing brighter

FROM RESEARCH TO REALITY

gdc gaf

GENERAL DYESTUFF COMPANY

A SALES DIVISION OF

GENERAL ANILINE & FILM CORPORATION

435 HUDSON STREET · NEW YORK 14, NEW YORK

CHARLOTTE · CHATTANOOGA · CHICAGO · LOS ANGELES · NEW YORK · PHILADELPHIA · PORTLAND, ORE.
PROVIDENCE · SAN FRANCISCO · IN CANADA: CHEMICAL DEVELOPMENTS OF CANADA, LTD., MONTREAL

caprolan®

TEXTURED YARN SEMINAR

DON'T LET THREAD GUIDES THROW YOU

Running textured filament yarns for the first time? Congratulations! It's a big step forward. For greatest success, keep this fact always in mind:

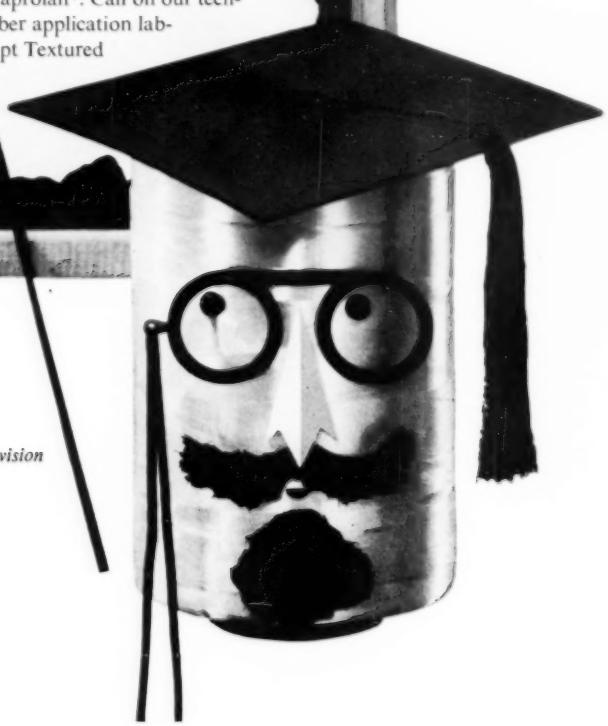
FACT: Textured Filament Yarns And Spun Yarns Are Not The Same

And because textured filament yarns are different, certain adjustments in mill methods are necessary to get the best results from these remarkable new yarns.

EXAMPLE:

Take the matter of thread guides, for instance. *Nicked* or *worn* thread guides can cause considerable damage with filament yarns and may result in streaks and filament breakage. Best idea is to install satin-finished ceramic guides which have been especially developed for use with filament yarns.

Thread guide damage is just one example of the problems we can help you avoid when running Textured Caprolan*. Call on our technical service, end-use development and fiber application laboratory staffs at any time to help you adapt Textured Caprolan to your product lines.



*Trade Mark—Allied Chemical's polyamide fiber

Fiber Sales and Service Allied Chemical *National Aniline Division*

261 Madison Avenue, New York 16, N. Y.

***#2** of a series*

Vinyl Upholstery Fabric

U. S. Rubber Co. introduced a new line of washable vinyl upholstery material with the appearance and hand of brocade early last month. Called Roma, the design is available in 10 colors.

The fabric is 54 ins. wide and weighs 27 oz. per yd. It has a strong elastic jersey backing and can be easily handled for contours.

Lees's New Carpets

James Lees & Sons Co. introduced three new carpets for fall selling. "Response" is an all-Acrilan wilton marketed in seven colors at about $11 a sq. yd. It is described as resilient, stain resistant, and easily cleaned. "Gemtweed" is a stria textured-nylon tufted carpet in six colors. It is said to be durable, mothproof, mildewproof, and resistant to pilling and shedding. Price is about $9 a sq. yd. "Thornlee" is 70-30 wool-nylon cut-pile carpet with the look and feel of Lees's frieze carpets. It has a bonded double jute back and a wool face of dieldrin-mothproofed wool. Colors are six plain and four crosstones. Price is about $9 a sq. yd.

Giant Conveyor Belts

Giant fabric conveyor belts got in the news early last month.

Goodyear Tire & Rubber Co. shipped part of an order for miles of conveyor belting to Ash Grove Lime & Portland Cement Co. to be used in a mine-modernization program.

The belting is 36 ins. wide and is made of rubber-laminated four-ply heavy-duty cotton-nylon fabric. The belts will be spliced together and used to move limestone one-half mile from quarry to mill at 1,000 tons an hour.

U. S. Rubber Co. shipped belting for what is said to be the world's longest slope conveyor to the Ishpeming, Mich., mines of the Cleveland Cliffs Iron Co.

The 36-in. belting is made of coated nylon and will withstand severe loading, abrasion, and turns and twists in the conveyor line. Over 7,500 ft. of the belting will be used in the installation.

Uniform Flannel

Baseball players next season may be playing in uniforms of a new blended-yarn fabric.

Buckland Fabrics and Chemstrand Corp. announced successful completion of field tests of uniforms made of a blend of 65% Acrilan, 20% rayon, and 15% nylon.

Advantages of the new flannel construction are said to be its wash-and-wear characteristics, dimensional stability, and resistance to moths, mildew, and stains.

Weight is 11 to 11½ oz. per yd. in 60-in. width. It is quoted at $2.50 a yd.

New Carpet Construction

Hightstown Rug Co. announced a new carpet-fabric construction early last month said to be woven by a new technique and to require a new machine, which Hightstown developed and is now patenting.

In the Hightstown construction, the surface yarn is woven through to the back of the carpet, which is later coated with a clear plastic bonding material.

The construction is said to accomplish two things: (1) put more wool yarn in the carpet, and (2) increase the strength of the fabric.

Hightstown is using this technique in its Painted Desert line of carpets. This quality is made of heavy, all-wool two-ply surface yarn of three types: straight, straight twist, and receding twist.

Outdoors Blanket

Union Carbide Corp. announced the production of a blanket designed particularly for use by boatsmen, campers, and outdoors sportsmen.

The blanket is of two-ply construction, with one side of Dynel fabric for warmth and the other side of vinyl plastic for weather protection. It is washable, repels water, and resists mildew and fire.

The blanket measures 48x80 ins. and is available in a variety of colors.

Fast Solution-Dyed Colors

Courtaulds (Alabama) Inc. announced last month that seven more of its Coloray solution-dyed-fiber colors have passed a 500-hr. sunlight-exposure test. That makes 17 of its 27 solution-dyed colors that have withstood the 500-hr. test without fading.

The seven new tested colors, all pastels, are aqua, sage, mocha, rose, nugget, crystal blue, and ecru.

Upholstery Fabrics

Collins & Aikman introduced a line of 20 upholstery fabrics featuring Tycora, spun nylon, Caprolan filament nylon, and Estran lofted acetate yarns early last month.

New colors included sand, flaxen beige, medium blue, and soft turquoise.

Decorative weave effects included gros pointe with slub yarn, two-tone hobnail, pebble, flat mohair,

← For more data, circle A-63 on Reader Service Card

FIBERS YARNS FABRICS

textured loops, crisscross jacquard, tone-on-tone stria, cut and uncut velvet, geometric patterns, abstract designs, hobnail in petit pointe, tone-on-tone corduroy, flagstone, zigzag, and lines and loops.

Blendura Fabrics

American Enka Corp. announced that the fall "sneak previews" of its Blendura cottons (two-thirds cotton and one-third rayon) resulted in enthusiastic merchandising programs for next spring.

Fabrics qualifying for the Blendura certification seal are said to bleach or dye better than similar all-cotton fabrics and to have a firm, silky hand, excellent draping qualities, and better luster in both whites and colors.

Styling is now being done for dresses, sportswear, blouses, children's wear, men's and boys' wear, and other uses.

Nylon Marine Tarps

Coated-nylon fabric has moved into a new use.

The U. S. Coast Guard and the American Bureau of Shipping have officially approved a cargo-hatch tarpaulin made of an 18-oz. vinyl-coated nylon fabric that has been under test for three years. The tarp has been accepted by the U. S. Maritime Administration.

Called Herculite 80, the tarp will replace No. 6 or heavier canvas duck in a number of marine uses.

Advantages cited for the new tarp include electronically sealed seams, nonfraying and nonraveling edges that don't have to be hemmed, and no tearing when a rope is passed through a penknife slit. It is lighter, easy to handle, colorfast, and easily washed; and its life is two to three times that of canvas.

Creslan Promotion

American Cyanamid Co. began "preintroduction" promotion of its long-awaited acrylic fiber, Creslan, last month.

In advertisements promoting the use of Creslan in garments, Cyanamid featured a 12-year wear-testing program said to be the longest, most-thorough testing any textile fiber has received prior to introduction and use. Sample garments are on display at Cyanamid's Fiber Division in New York.

Production and use of Creslan are expected to hit full stride next year.

New Braided Hose

Goodyear Tire & Rubber Co. has announced a new heavy-duty sanitary hose for use in food plants. Called Flexsteel Sanitary, the hose is made with a steel-wire braid and two cotton-yarn braids. It will withstand saturated steam pressures up to 100 psi.

Cordage Nylon

DuPont (Canada) announced the production of a new nylon yarn, Type 721, at its Kingston, Ont., plant.

Developed for use in rope and cordage, the yarn is reported to have high wet and dry strength and durability under repeated wet or dry loadings.

In lightweight constructions for easy handling, ropes and cordage made of Type 721 nylon are said to be resistant to abrasion, light, mildew, and rot.

Auto Upholstery

Courtaulds Ltd. (England) introduced a new solution-dyed-viscose fabric called Duracour for upholstery uses early last month.

Three years in development, the fabric has a resinous backing and is said to resist fire, dirt, and stain and to repel liquids. It is available in 18 designs and 15 colors. Retail price in England is about $2.45 a yard in 48-in. width.

Courtaulds says Ford and Austin plan to use the fabric for upholstery in some of their 1959 model cars.

Diaphragm Fabric

Reeves Bros., Inc., has announced a new heat-resistant diaphragm fabric for use in gas-appliance regulators, automotive oil gauges, and other controls.

One of Reeves Bros.' Reevecote line, the fabric is woven nylon coated with Buna-N rubber. It is said to have double the heat resistance of previous Buna-N-coated diaphragm fabrics and better resistance to oils, solvents, and gas condensates.

Aluminum-Asbestos Cloth

The textile division of U. S. Rubber Co. has developed a special aluminized asbestos fabric for use as a decorative surface that is resistant to fire, moisture, and odors and is easily cleaned. More than 4,000 yds. of the fabric was used to line the new Casa Manana opera house in Fort Worth, Tex.

The fabric is made of aluminum foil laminated on vaporproofed asbestos cloth.

Seat-Cover Fabric

Technical Textiles, Inc., will show a colorfast all-polyethylene auto-seat-cover fabric called Tru-Hue Poly-Tex at the Los Angeles Auto Trim Show early next month.

Yarn used to weave the fabric is extruded by Reeves Bros. in filament form from the frozen polyolefin polymer plastic Fortiflex produced by Celanese.

Called Reevon, the yarn is said to be impervious to sunlight, stains, and soil. The fabric can be wiped clean with a damp cloth.

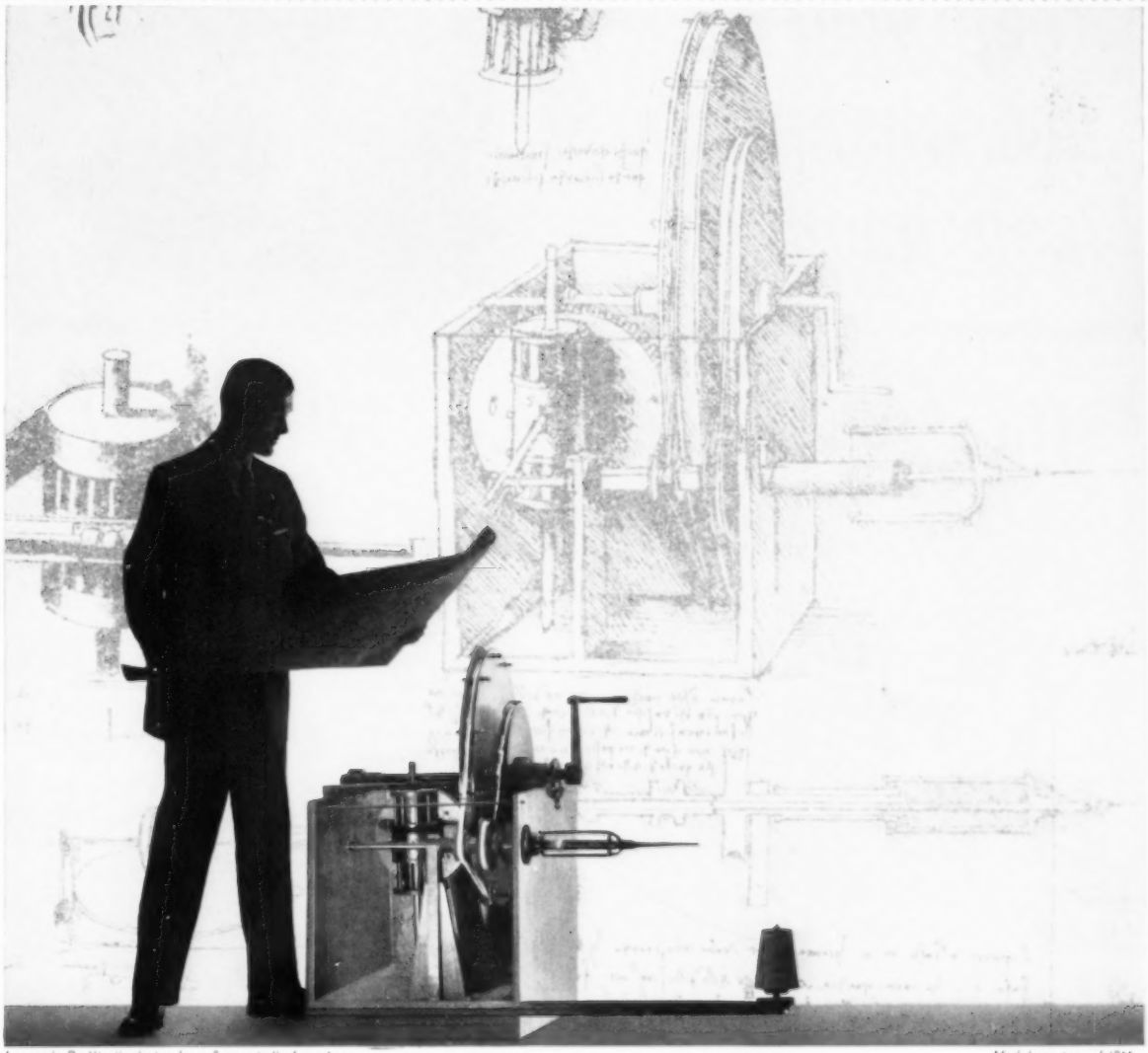
Taslan in England

Du Pont has licensed Courtaulds Ltd. (England) to use the Taslan yarn-texturing process. By the agreement, Courtaulds will get technical help from Du Pont and use the Taslan tradename.

Courtaulds has been manufacturing textured yarn and selling it under the name "puff yarn."

For more data, circle A-64 on Reader Service Card →

creative designing calls for an open mind



Leonardo Da Vinci's design for a flyer spindle for a loom — *Model courtesy of IBM*

EVEN DA VINCI'S DESIGN COULD HAVE BEEN BETTER WITH HELP FROM AN SKF ENGINEER—An SKF engineer never has to push one bearing over another, because SKF makes all four types of ball and roller bearings in over 3,000 sizes. This gives every SKF engineer the kind of flexibility he needs to keep an open mind on *any* bearing problem. Give your problem to SKF and see.

7812

Spherical, Cylindrical, Ball, and "Tyson" Tapered Roller Bearings

EVERY TYPE—EVERY USE

SKF®

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.

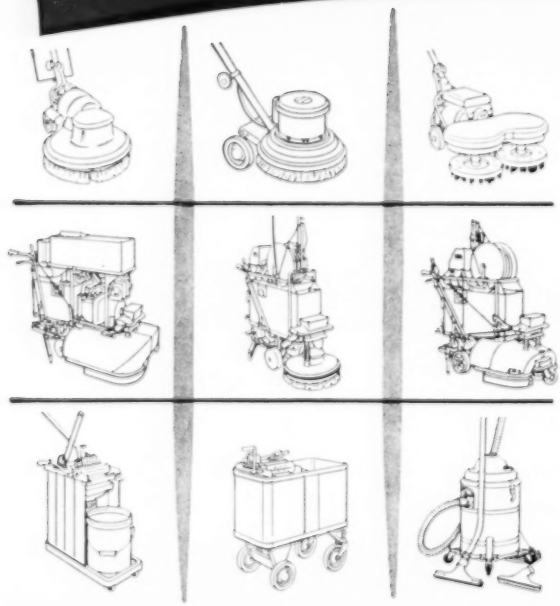
*REG. U.S. PAT. OFF.

Keep your floor-maintenance men happy . . .

with Job-Fitted EQUIPMENT!

Choose from the COMPLETE Finnell Line

More than a score of models and sizes permits selection of the equipment that's exactly right for your job!



However much a maintenance man may want to do a good job, and at the same time show savings in labor costs, he's *stymied* if the machine is too small, or too large, or is otherwise unsuited to the job. Different floors and areas call for different care and equipment. That's why *Finnell makes more than a score of floor-maintenance machines.* From this complete line, it is possible to choose equipment that is correct in size as well as model . . . that provides the maximum brush coverage consistent with the area and arrangement of the floors.

Finnell offers *Conventional Polishing-Scrubbing Machines* in both concentrated and divided-weight types, each in a full range of sizes . . . a *Dry-Scrubber,* with self-sharpening brushes, for cleaning grease-caked floors . . . *Combination Scrubber-Vac Machines* for small, vast, and intermediate operations, including self-powered as well as electric models . . . *Mop Trucks* . . . a *Wet and Dry Vacuum Cleaner,* in baked enamel or stainless steel, with 1½ hp By-Pass Motor. In addition, *Finnell* offers a full line of fast-acting *Cleansers* for machine-scrubbing . . . *Sealers* and *Waxes* of every requisite type . . . *Steel-Wool Pads* and other accessories – *everything for floor care!*

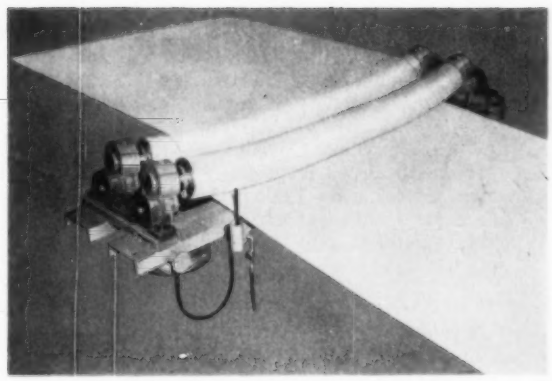
In keeping with the *Finnell* policy of rendering an individualized service, *Finnell maintains a nation-wide staff of floor specialists and engineers. There's a Finnell man near you* to help solve your particular floor-maintenance problems . . . to train your operators in the proper use of *Finnell Job-Fitted Equipment and Supplies* . . . and to make periodic check-ups. For consultation, demonstration, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1911 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines

Everything FINNELL for Floor Care

BRANCHES IN ALL PRINCIPAL CITIES



Automatic Web Control

A triple-action web control that keeps selvages aligned, removes wrinkles, and maintains width has been marketed by Mount Hope Machinery Co., Taunton, Mass. The unit is based on rubber-covered rolls with variable-curve end sections. Feelers follow the cloth selvages and actuate pneumatic diaphragms that vary the curvature of the end sections of the rolls so that the fabric is kept aligned.

Circle T-1 on Reader-Service Card

Control for Sweater Machine

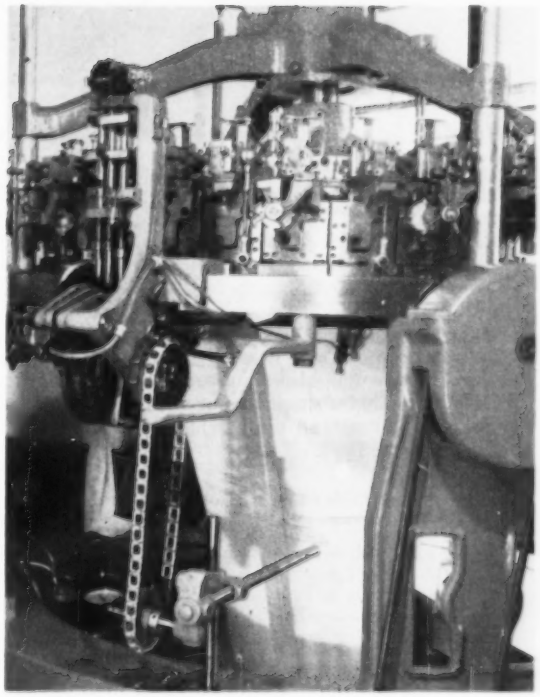
A control mechanism for its MFRC sweater machine has been developed by Scott & Williams, Inc., Laconia, N. H. The control overcomes disadvantages of the manufacturer's former chain controls.

It consists of a drum with two complete sets of cams that control machine movements. Each set of cams controls a full knitting cycle consisting of the interlock body, 1x1 rib bottom, press-off, antiravel welt courses, and nylon draw thread. On the completion of one revolution of the drum, two body or sleeve blanks have been knitted.

Advantages of the drum control are: (1) changes for various lengths of sweaters are made quickly, (2) there's greater accuracy of control-rod positioning, and (3) camming surfaces wear less.

The control may be installed on existing machines that have original chain controls.

Circle T-2 on Reader-Service Card



Improved Worsted System

A number of improved machines for the New Bradford system of worsted drawing and spinning have been announced by Prince-Smith & Stells Ltd., Keighley, England.

A feature of the Raper Autoleveller is the substitution of a 24-in. coiler and round can for the old rectangular can. Capacity is the same, but coiling is better and sliver is more even.

The draw box now has an Autoleveller unit and pressure drafter at each spindle. Spindle pitch is 10¼ ins., and bobbin size is 14x7 ins.

A six-spindle open drawing finisher with conventional drafting is now part of the system. This machine has an 8-in. spindle pitch and a detachable turntable creel that increase efficiency.

Other improvements include electric stop motions for all machines and spray oilers for gill boxes.

Circle T-3 on Reader-Service Card

Electrical Lubrication

Two automatic electrically operated centralized-lubrication systems, called Electro-Luber, have been introduced by Lincoln Engineering Co., 2742 Natural Bridge Ave., St. Louis 20, Mo. Both systems provide high- or low-pressure lubrication for machines.

A unit weighs only 65 lbs. and can be mounted in less than ½ sq. ft. of space so that it becomes an integral part of the machine. Operation is entirely electrical, and no compressed air is needed.

One model is for 1,000-psi. maximum pressure, and one is for 2,900 psi. Each pump is powered by a ¼-hp. electric motor. Up to 1,000 bearings are lubricated in only a few seconds.

Circle T-4 on Reader-Service Card

Worsted Spinning Frame

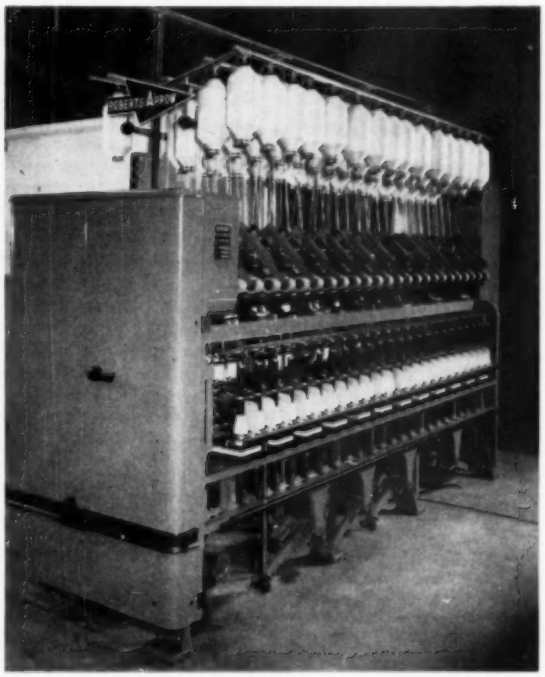
A worsted spinning frame that can process fibers from 3 to 8 ins. long has been announced by Roberts Co., Sanford, N. C.

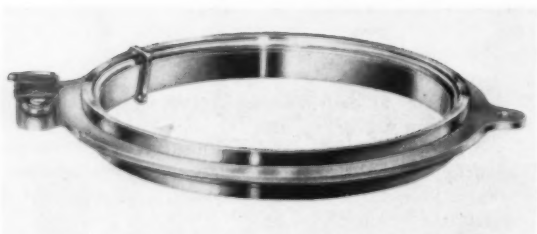
The frame, called Arrow WM-2, has the Roberts four-roll drafting system that can handle a variety of fibers and fiber lengths without changes in roll settings.

All four top rolls are mounted in ball bearings and are equipped with the PosiWate suspension weighting that eliminates cap bars and is adjustable from 90 to 120 lbs. Fluted bottom rolls also are mounted in ball bearings.

The frame has a simple arrangement for reversing the twist, and all constants can be changed at one master set of gears in the head.

Circle T-5 on Reader-Service Card





Improved Spinning Ring

A conical spinning ring that provides seam lubrication to the top surface and inside conical surface where the traveler makes contact has been announced by Herr Mfg. Co., Inc., 309 Franklin St., Buffalo, N. Y.

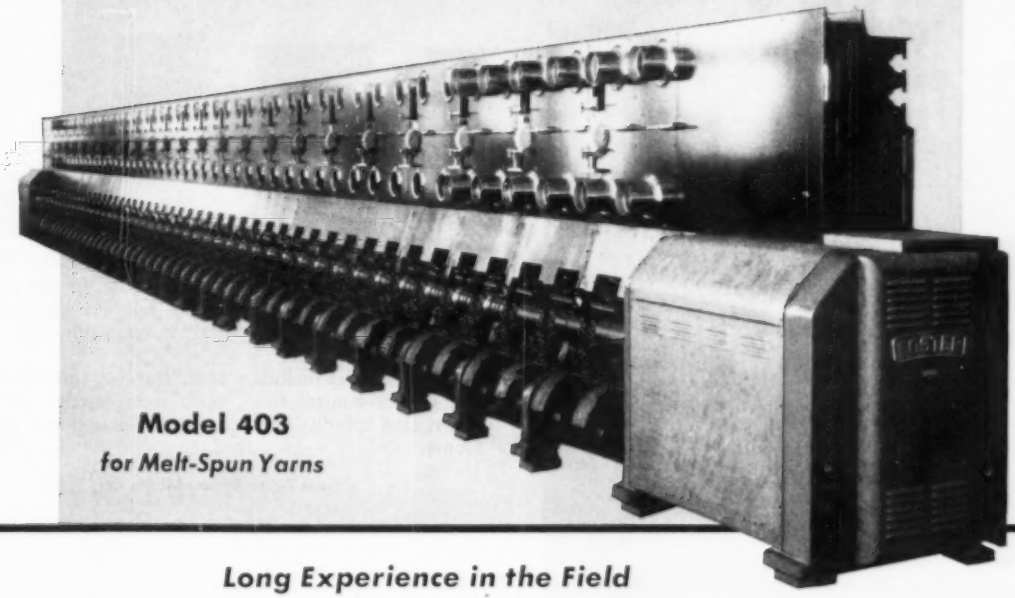
Compared with regular rings, smaller amounts of oil are used, cleaner yarn results since there is no chance for oil leakage, and oil flow is more uniform.

Other advantages are that travelers last longer and rings give longer service with less yarn breakage. Either hand oiling or a pressure system can be used.

Circle T-6 on Reader-Service Card

FOSTER TAKEUP WINDERS

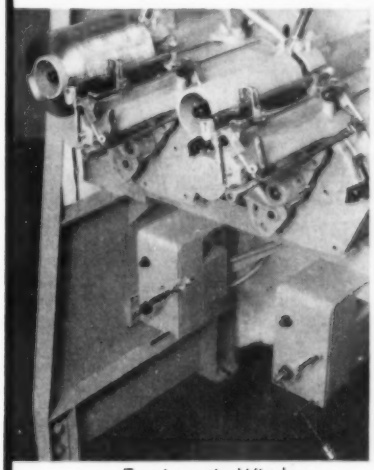
For Melt-Spun, Wet-Spun and Dry-Spun Synthetic Fibre Yarns



Model 403
for Melt-Spun Yarns

Long Experience in the Field

We have had long experience in the design and manufacture of takeup winders for melt-spun, wet-spun and dry-spun synthetic fibre yarns. We have made and are now making machines of this type for leading producers of synthetic fibres. We illustrate herewith the two types of machines and describe briefly how they operate.



Tensiomatic Winder
for Wet-Spun and Dry-Spun Yarns

MODEL 403

For continuous winding of synthetic melt-spun yarns direct from spinneret at speeds up to 6000 ft. per minute. Yarn (15 to 1200 drawn denier) travels from spinneret down through heated chimney over finish rolls, with ceramic guides under each to maintain proper arc of contact, to a series of Godet feed rolls, delivering the yarn to a reciprocating traverse guide (actuated by independently driven traverse cam) and to the package core, which is driven by a chrome plated steel roll. Pressure of package on roll automatically adjusted as its weight increases. One 5¼" traverse package, two 3¼" traverse packages, or four 1" traverse packages per holder. Drive roll shaft and feed rolls driven by separate synchronous motors. Ribbon wind is eliminated. 16" gauge, 56 spindles with 2 independent drives (28 spindles each).

TENSIOMATIC WINDER

For continuous winding of wet-spun or dry-spun synthetic yarns direct from spinneret to 6" traverse packages (1 or 2 packages per position) or to 10" traverse packages weighing up to 30 lbs. Speeds up to 450 feet per minute. Precise wind machine. As package builds up and yarn speed increases, speed of motor is automatically and proportionately decreased by means of dancer rolls and an electronic control device.

Our Engineers Will Work With You

If you are developing a new synthetic fibre, it will pay you to consult our engineers regarding your winding requirements. They are familiar with your problems and can custom design a machine to your requirements.

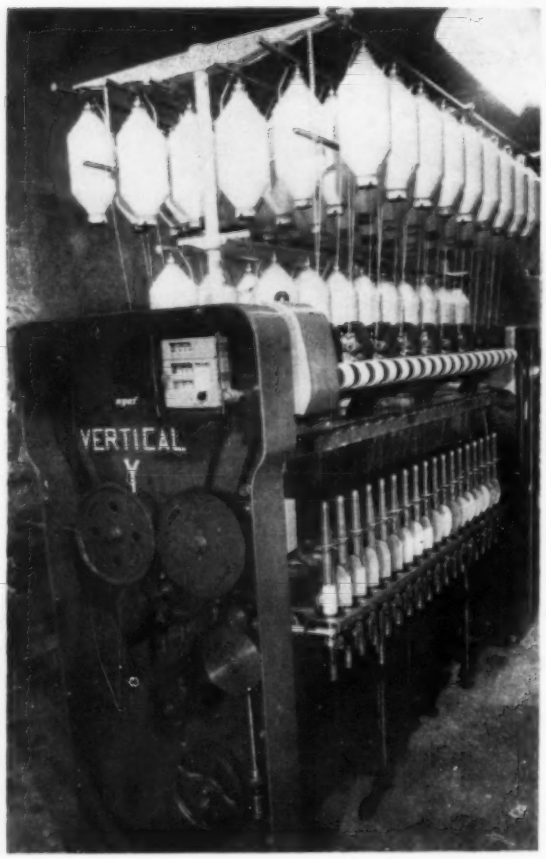
FOSTER MACHINE COMPANY

A Yarn Winder for Every Purpose

Westfield, Massachusetts, U.S.A.

Southern Office — Johnston Bldg., Charlotte, N. C. • *Canadian Representative* — Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que. and 100 Dixie Plaza, Port Credit, Ontario
European Representative — Muschamp Textile Machinery Ltd., Keb Lane Bardsley, Oldham, Eng.

338-8



Straight-Line Spinning

A straight-line (creel to traveler) spinning frame 24 ins. wide has been announced by F. A. Young Machine Co., York Rd., Gastonia, N. C.

Called the Vertical Y, the frame normally double-creels 12x7 bobbins but can be converted to spin directly from drawing sliver. With 12x7 bobbins, drafts to 75 are possible; when converted to spin drawing sliver, drafting is up to 200.

Other features include a 12-in. traverse, simplified gearing, balloon-control rings, open creel, suction cleaning, antifriction spindles and idlers, and lower power requirements.

Circle T-7 on Reader-Service Card

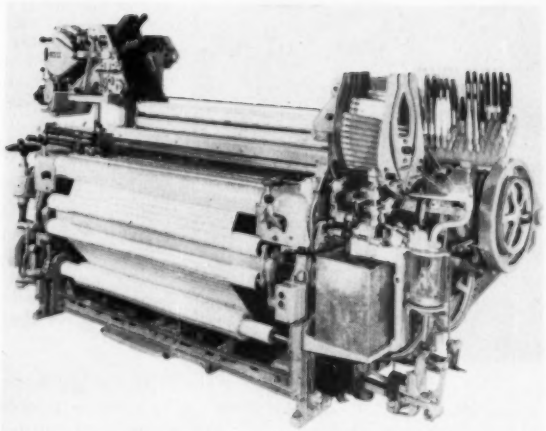
Loom for Man-Made Fibers

A four-color, automatic, bobbin-changing loom, Sinzaw/4, for man-made fibers and silk has been developed by Ruti Machinery Works Ltd., Ruti, Zurich, Switzerland.

A horsehoe-shaped magazine for four colors of filling has these features: (1) electromagnetic control, (2) vacuum-controlled shuttle-eye thread cutter, and (3) space for 76 bobbins. Bobbins slide down gently in the magazine but are held firmly in position.

A foot lever reverses the loom to let the weaver bring the lay to the open-shed position. An automatic let-off is controlled by a cam on the lower shaft.

Circle T-8 on Reader-Service Card



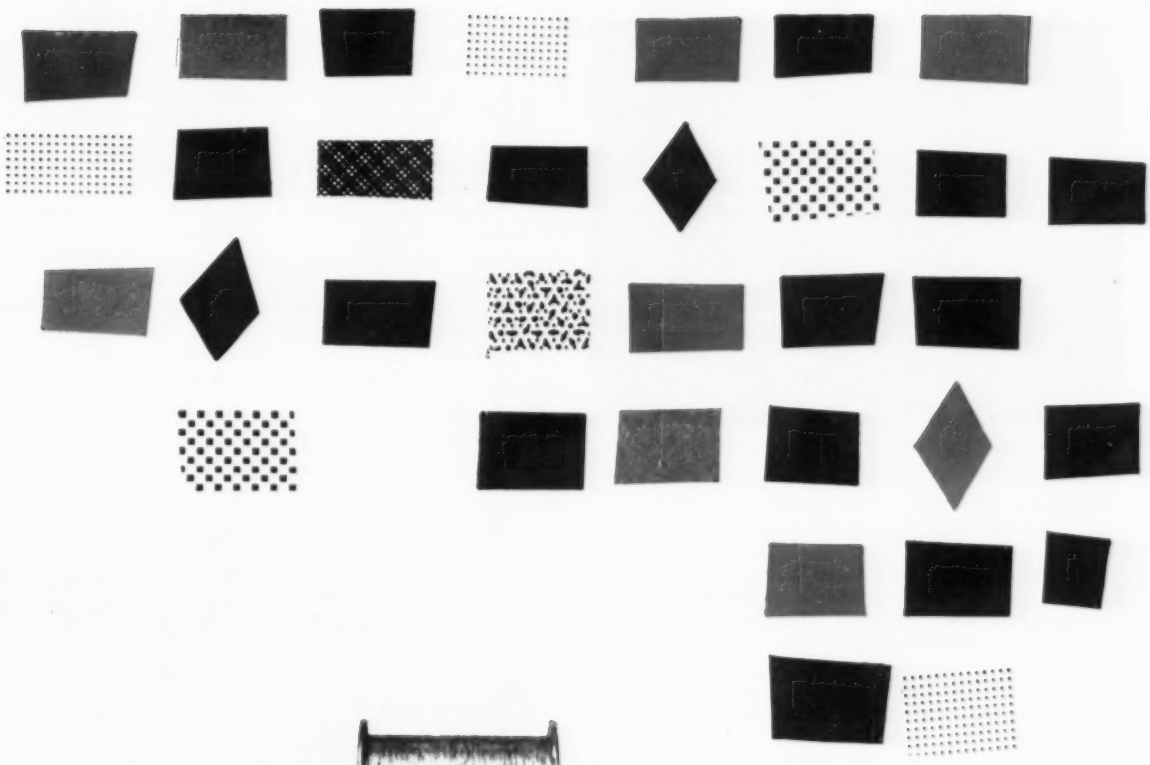
Drop-Box-Loom Picker

A synthetic-elastomer drop-box-loom picker said to give up to 10 times the life of conventional pickers has been developed by The Dayton Rubber Co., Textile Div., 401 S. C. National Bank Bldg., Greenville, S. C.

The picker, Golden Thorobred, requires no oil or dressing, extends the life of picker sticks, and offers a cushioning action that reduces shuttle wear greatly.

The noise level of looms is diminished because of the shock-absorbing qualities of the picker material. The pickers are easily adjusted, which results in additional savings in labor, replacement parts, and loom downtime.

Circle T-9 on Reader-Service Card



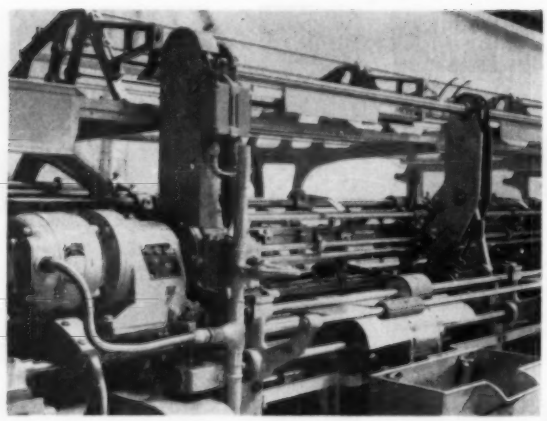
SPEAKS LUREX® FOR ITSELF

In texture versatility. Many are the textures possible with Lurex. Because of the feeling of dimension which Lurex contributes, unusual textural effects can frequently be achieved on relatively basic weaves. On the other hand—thanks to its pliability, strength and high tensile properties—Lurex lends itself perfectly to intricate constructions and knitted textures. In texture versatility—as in color, luxury appeal, performance and customer acceptance—there is no substitute for Lurex.

In national advertising. Lurex is the metallic yarn backed by a vigorous store promotion plan, with consistent year-round consumer advertising in color. It is the yarn your customers know. They know it is the yarn *their* customers recognize. Feature the name that's known in metallic yarn: Lurex, non-tarnishing metallic yarn made only by The Textile Fibers Department of

The Dow Chemical Company • Williamsburg, Virginia • New York: 350 Fifth Avenue

Boston • Camden, N. J. • Charlotte, N.C. • Chicago • Florence, S.C. • San Francisco • Manufacturing Affiliates in Canada: William B. Stewart & Sons Ltd., Toronto and Montreal



Knitting Machine

A fully automatic full-fashioned underwear and outerwear knitting machine has been announced by S. A. Monk Ltd., Sutton-in-Ashfield, England. The machine was developed in collaboration with I. & R. Morley Ltd., hosiery manufacturers, Nottingham.

Outstanding mechanical features of the machine are automatic: buffing, racking, bar-feed mechanism, fabric take-off, dual-motor drive, and yarn-deflecting mechanism. All these parts are controlled electromechanically.

This machine, Samcomatic, reduces manual operations and is made to knit long runs of a specific fabric.

Circle T-10 on Reader-Service Card

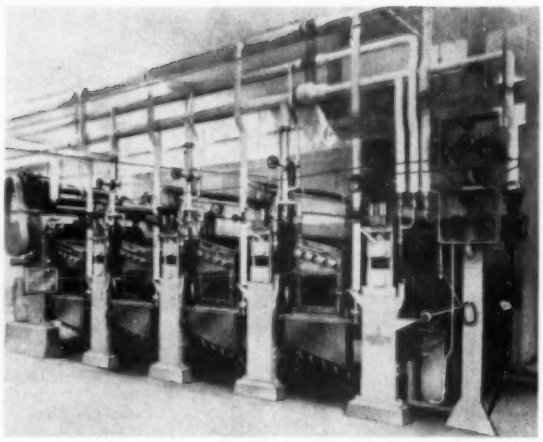
Open-Width Washer

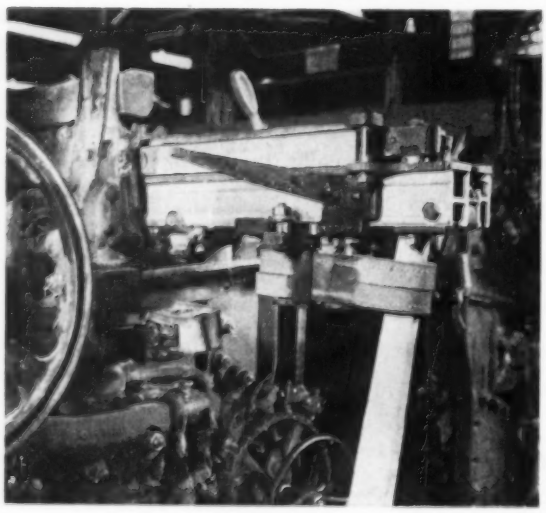
A compact multicompartment washer for all types of fabric is being offered by Svenska Textilmaskinfabriken, Göteborg, Sweden. Ernest L. Frankl Associates, 515 Madison Ave., New York 22, N. Y., is the U. S. representative.

The machine depends on counterflow of water, small bath volume, and high lift of fabric above the liquor to accomplish efficient washing. Squeeze rolls between units and at the delivery end are driven so that control of tension in the range is positive and adjustable to any fabric requirements.

Because of the small volume of water, steam, and chemicals necessary to provide good washing, operating costs are low.

Circle T-11 on Reader-Service Card





Loom Checkstrap

A two-piece checkstrap for looms, Twin-Check, that replaces one-piece checkstraps has been announced by J. E. Rhoads & Sons, 2100 W. 11th St., Wilmington 99, Del.

Wear is distributed evenly over the two straps as they follow through the arc of the picker-stick stroke so that service life of the straps is increased. Little loom-parts adjustment is necessary after the straps are applied because they are prestretched.

Circle T-12 on Reader-Service Card

Report from Du Pont:

Metallic yarns made with MYLAR® offer production efficiencies never possible before!

Q *Can they be run unsupported?*

A YES. "Mylar"* polyester film is 50 to 200% stronger, with 10 to 15 times the flex life of other films used for metallic yarns. Since the yarn is much stronger, breakage problems are virtually eliminated . . . your looms and knitting machines run smoothly. And only metallic yarns made with "Mylar" (metalized type) can be used with electrical stop motion devices.

Q *Can they stand up in finishing?*

A YES. "Mylar" resists solvents, water and most acids and alkalies. And because "Mylar" is heat-resistant, metallic yarns made with this durable polyester film can withstand temperatures over 300°F. You can heat-set fabrics . . . fabrics can be bleached, dyed and cross-dyed in the piece at boil.

Q *Are they more expensive to use?*

A NO. Metallic yarns made with "Mylar" often cost less than other types of metallic yarns. Because "Mylar" is strong even in thin gauges, the yield in 1,000 linear yards per pound can be 1½ to 3 times greater. Where unsupported metallic yarns made with "Mylar" are used to replace supported metallic yarns, your cost savings are even more apparent. In all cases, metallic yarns made with "Mylar" perform better in weaving, knitting and finishing.

Q *Can they withstand machine washing?*

A YES. Metallic yarns made with "Mylar" resist heat, water and most chemicals. If the other yarns in a finished fabric can withstand machine washing, drycleaning or steam ironing, so, too, can the *non-tarnishing* metallic yarn made with durable "Mylar" film.

And metallics made with MYLAR® help you sell more fabric

Metallic yarns made with "Mylar" add elegance and sales appeal to any fabric, just as metallics of old. The big difference is found in *performance*... better performance in manufacturing and better performance—meaning greater consumer appeal—in the fabric.

Metallic yarns made with "Mylar" are soft, washable and last the life of a fabric. They now come in a wide range of decorator colors. All of these important features mean greater sales appeal at the retail level.

Du Pont manufactures "Mylar" polyester film, the base material that helps make this new and highly improved metallic yarn possible. For detailed information on performance, yield and costs, check your metallic-yarn supplier. Or write today for a 20-page Du Pont booklet on facts about metallic yarn made with "Mylar".

*"Mylar" is a registered trademark for Du Pont's brand of polyester film.

Metallic Yarn made with DU PONT MYLAR® POLYESTER FILM

DU PONT
Reg. U.S. Pat. Off.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Film Dept., Room TW-11
E. I. du Pont de Nemours & Co. (Inc.)
Wilmington 98, Delaware

☐ Please send your 20-page booklet on facts about metallic yarn made with "Mylar" polyester film.

☐ Please send a list with names of suppliers of metallic yarn made with "Mylar".

*Name*_____ *Title*_____

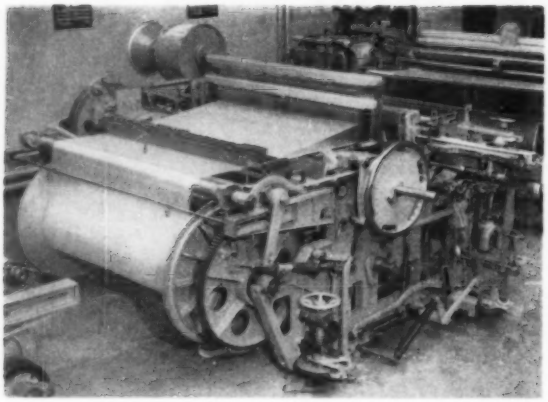
*Firm*_____

*Address*_____

*City*_____ *State*_____

*Specific interest*_____

For more data, circle A-68 on Reader Service Card



Single-Shuttle Loom

A single-shuttle, automatic, bobbin-changing loom for silk, man-made-fiber fabrics, and blends has been built by George Hattersley & Sons Ltd., Keighley, Yorkshire, England.

The loom has a 48-in. reed space and runs 200 ppm. It has no arches; and the harness motion is inside the loom. From four to eight harnesses may be run for plain weaves. But the top shaft is extended so that a dobby may be used if required.

A six-bank electric stop motion is used. An electric filling feeler actuates filling changes.

The let-off is automatic, and the vernier take-up can be adjusted to weave 5 to 200 ppi. without changing the change gear.

The British Rayon Research Association's device to prevent creases in fabric is used on the loom.

Circle T-13 on Reader-Service Card

Dyeing Machine

An all-purpose high-temperature dyeing machine has been produced by Callebaut-De Blicquy, 73 Chaussée De Ruysbroeck, Brussels, Belgium.

The machine features a built-in reversible pumping system that is fitted directly to the bottom of the kier. A large flow of liquor at low pressure is made possible by the pumping system, and considerable piping is eliminated.

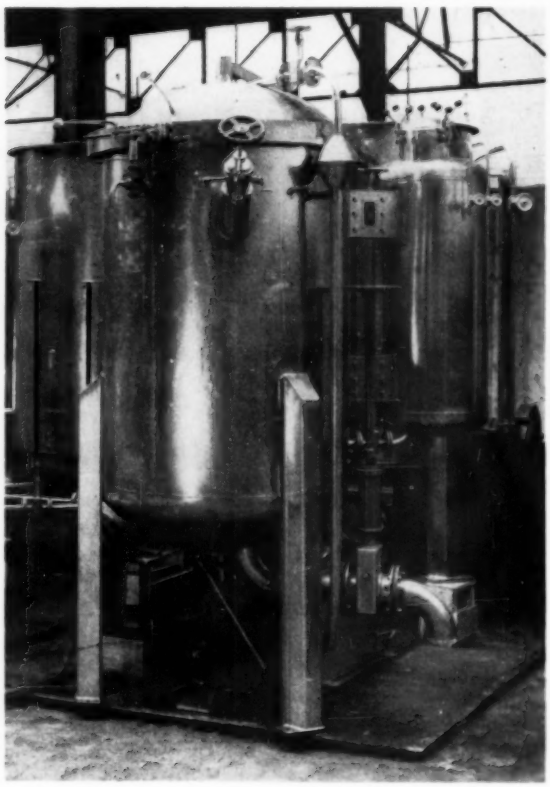
The kier has a false bottom that will accommodate the usual hollow spindles that are used in package dyeing. Or with simple perforations, the machine can be used to dye hanked yarn suspended from poles at the top of the kier.

Liquor flow is automatically reversed by a control mechanism that can be set for from 2- to 20-min. flow in either direction.

Construction is of stainless steel throughout. The machine can be supplied in various models for open dyeing, closed dyeing at 100° C. or less, or with suitable pressure equipment to permit dyeing at over 100° C.

Auxiliary equipment available includes yarn carriers, pressurized reserve dye tanks, and automatic temperature controls.

Circle T-14 on Reader Service Card



Adjustable-Speed Drives

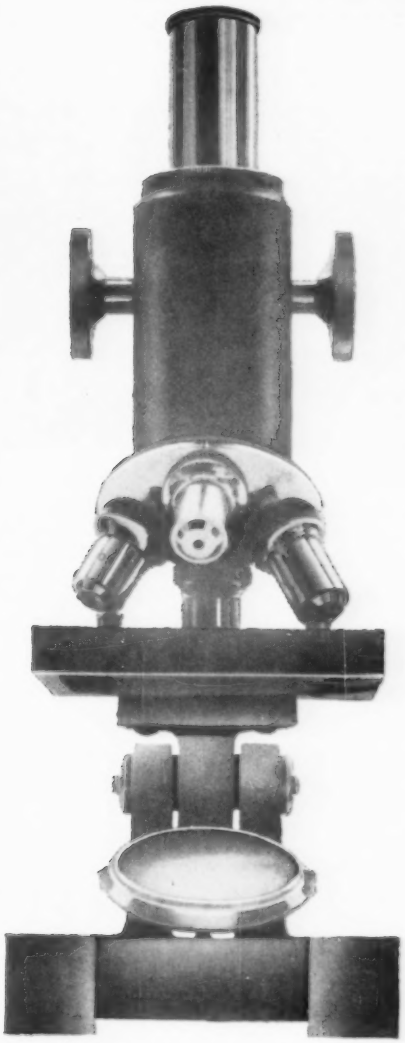
A complete line of packaged motor-generator-type adjustable-voltage drives has been announced by Square D Co., 4041 N. Richards St., Milwaukee 12, Wis. Combining the convenience and economy of a.c. power with the versatility of d.c. power, the drives are furnished with standard speed ranges up to 8 to 1 by armature voltage control.

Additional speed ranges by armature voltage control and by motor field control are also available.

Transistors combined with magnetic amplifiers and metallic rectifiers make the drives reliable; static units eliminate warm-up time and reduce maintenance and downtime. The drives are available in ratings from 3 to 200 hp. for single or multimotor applications. Convenient arrangement of components and prewired terminals for all connections simplify installation.

Circle T-15 on Reader-Service Card

GOOD TIME FOR HARD LOOKS



at needless chlorine costs

Columbia-Southern's manufacturing and servicing experience with quality chlorine may help you achieve appreciable savings on former costs. Isn't this the ideal time to see if your chlorine purchase and use practices aren't costing more than necessary?

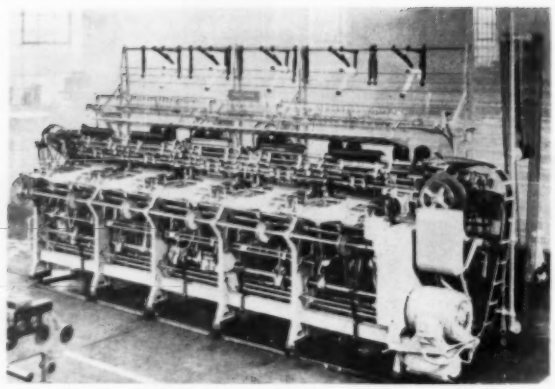
Let's take the *quantity* of chlorine you are currently buying and handling. Is your operating volume most economically adapted to tank car, barge, ton tank, or cylinder delivery? Are you quite sure that new or projected changes in your products or processing won't change this picture? Do you have all the facts on completely up-to-date unloading techniques and equipment?

Let's look at the uniform *quality* of the chlorine you are receiving. Here again, Columbia-Southern can advise you with recognized authority as the country's leading merchant producer. As a matter of record, we have led in developing such vital improvements in chlorine transportation as the fusion-welded tank car, the 55-ton single unit car, the safety-dome platform, the industry's first large capacity barge fleet for inland waterways delivery, and other user economies or safety features.

Our well-grounded Technical Service specialists, too, have helped customers save on needless chlorine costs. One valuable aid, for example, is their extremely thorough yearly inspection of your unloading, storage, and use operations. Isn't it simple good business, especially now, to see what savings they might work out for you? You may request their services either through our Pittsburgh address, or any of the fourteen Columbia-Southern District Sales Offices.

The Columbia-Southern Chemical Corporation, One Gateway Center, Pittsburgh 22, Pennsylvania. Offices in principal cities. In Canada: Standard Chemical Limited.

COLUMBIA-SOUTHERN CHEMICAL CORPORATION A Subsidiary of Pittsburgh Plate Glass Company



Full-Fashioned Machine

Model TK-7 is a five-head full-fashioned hosiery machine built by Mellor-Bromley & Co. Ltd., Leicester, England. Sets of six or eight machines can be operated by one knitter at speeds up to 105 courses per minute.

The machine has automatic welt turning, picot mechanism, automatic racking, nonrun attachment, and ringless three-carrier attachment. Stretch nonrun hose can be made with a combined nonrun and alternating-carrier attachment.

The stops and fashioning points automatically back rack to the starting position during the welt knitting of the following set. The Bentley Knitting Machine organization, 31 Canal St., Providence, R. I., is U. S. agent.

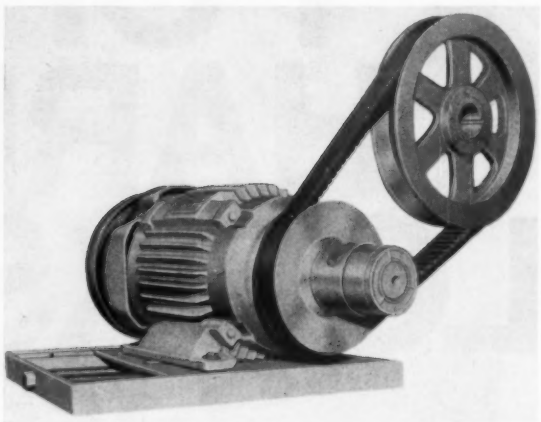
Circle T-16 on Reader-Service Card

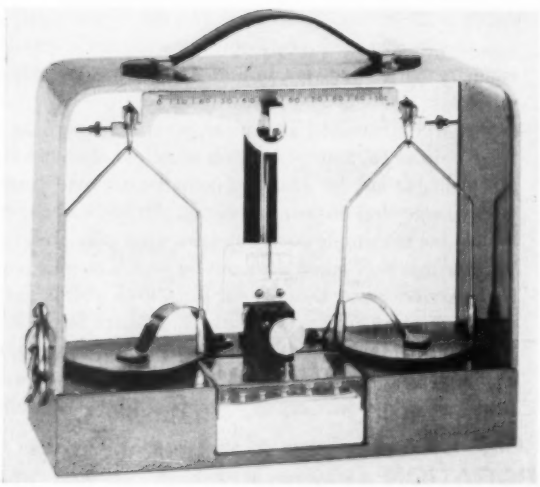
Spinning-Frame Drive

A variable-speed drive designed especially for spinning frames has been announced by Reeves Pulley Co. Div., Reliance Electric & Engineering Co., Columbus, Ind.

Pulleys, available in 7½, 10, and 15 hp., are adjustable to any speed setting in the 2-to-1 range. Featured is a special field-tested belt that is available in right- or left-hand assemblies for aisle or underframe mounting.

Circle T-17 on Reader-Service Card



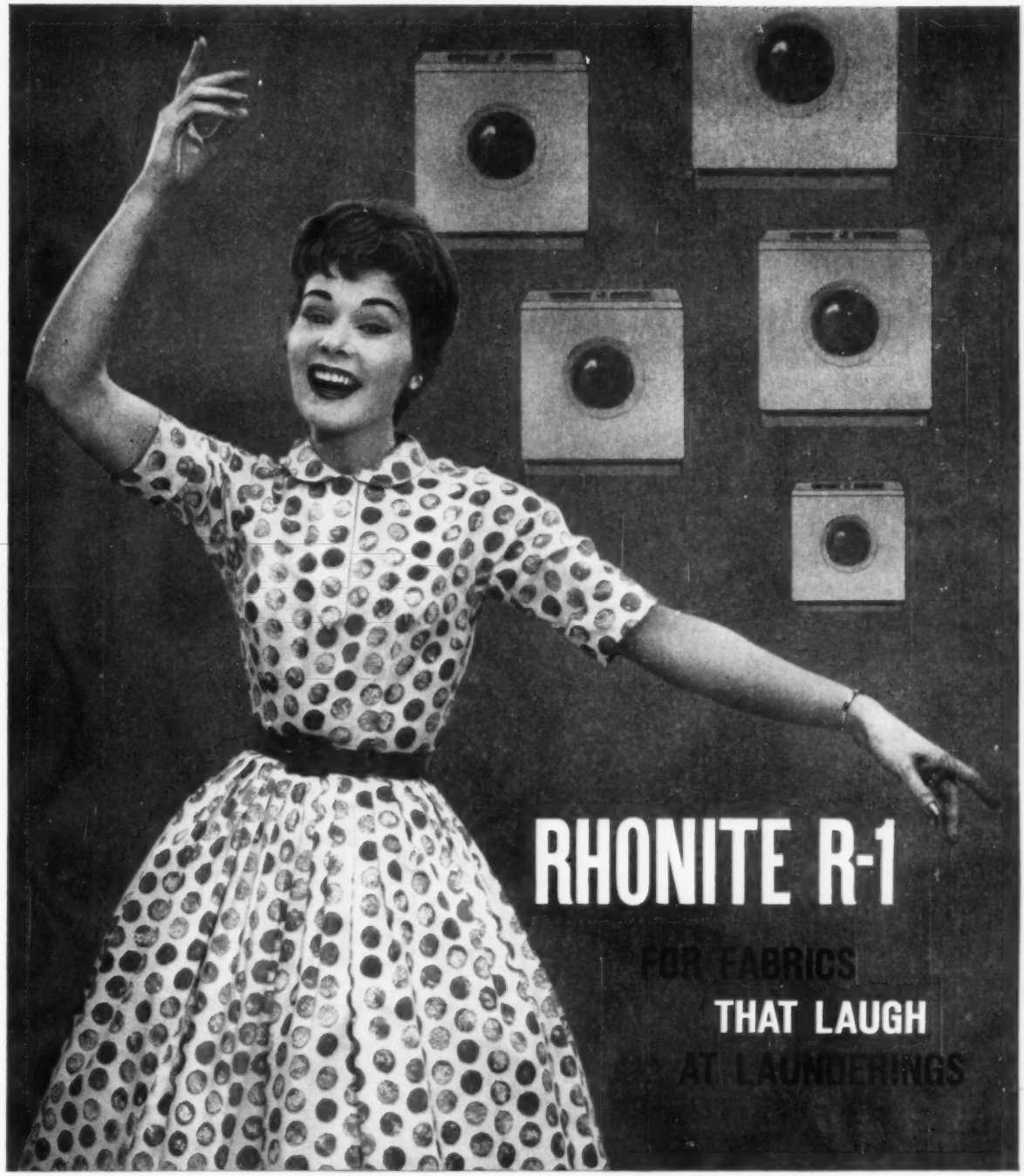


Portable Scale

A portable scale for general textile use, such as for determining yarn numbers from skeins or short lengths, has been introduced by Alfred Suter Co., 200 Fifth Ave., New York 10, N. Y.

The scale is graduated in either 1/100-grain increments or milligrams. Capacity is 500 grains or 100 grams, and pan diameters are 2½ ins. The cover is Plexiglas and aluminum.

Circle T-18 on Reader Service Card



Gay cottons like the one above—as well as rayons and blends—have a special reason for that happy, carefree look they wear—they've been treated with RHONITE R-1. This modified urea formaldehyde resin is a monomeric product of such small molecular size that it penetrates and reacts inside textile fibers. That's why wash tubs won't worry fabrics treated with RHONITE R-1. And they just wink at wrinkles—only a touch of the iron and you'd think they were store-fresh.

Don't you think you ought to find out about treating your fabrics with RHONITE R-1? Why not write today?

Chemicals for Industry

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

RHONITE *is a trade-mark, Reg. U.S. Pat. Off. and in principal foreign countries.*

For more data, circle A-70 on Reader Service Card

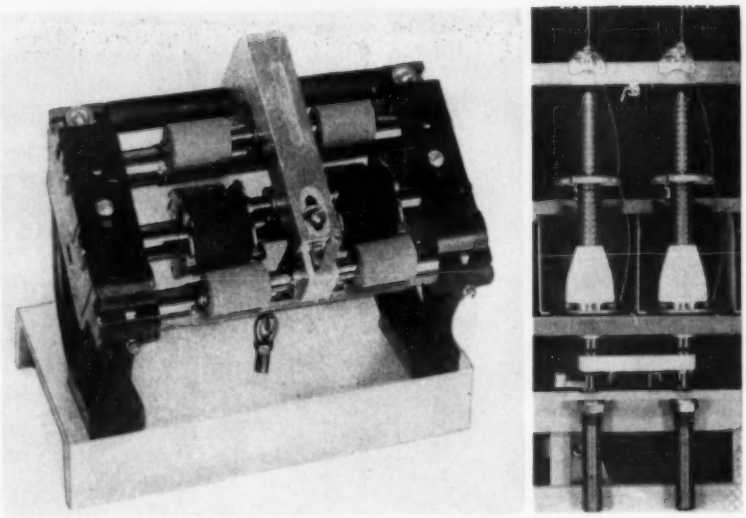
Improved Spinning Frames

The M-1 and M-2 Arrow spinning frames have been improved in a number of ways, according to Roberts Co., Sanford, N. C.

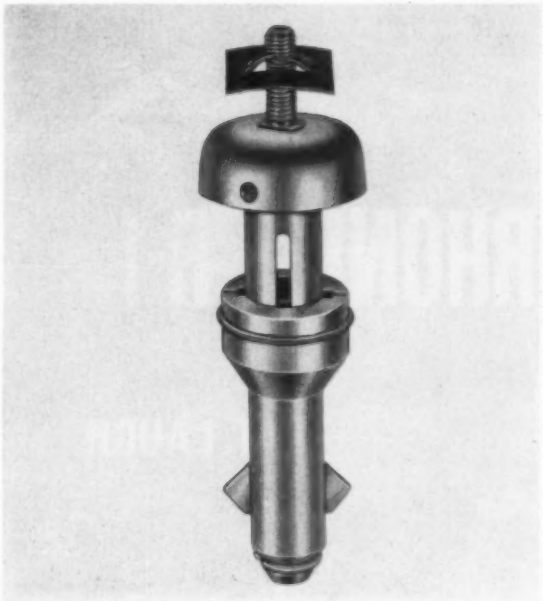
Improvements include addition of the PosiWate top-roll suspension system that has no hooks and short springs, a single balloon-control ring that cuts down yarn fuzz, and short separators that do not interfere with doffing.

Improved fluted bottom rolls are mounted in ball bearings, and there are ball bearings in every working, turning, and oscillating motion. Both frames are available in 48-spindle intermediate sections for flexibility.

The balloon-control ring and top-roll suspension are shown in the accompanying photographs.



Circle T-19 on Reader-Service Card



Bobbin Hanger

An improved bobbin hanger that makes creeling faster and easier has been put on the market by Hartford Machine & Screw Co., Box 1776, Greenville, S. C.

The hanger has a cast body and free-running ball-bearing construction. A brake is available if required. A feature is the ease with which roving bobbins can be slipped on and off the hanger.

Circle T-20 on Reader-Service Card

Motorized Axial-Flow Fans

A line of motorized axial-flow fans to be mounted directly in ducts and stacks for exhaust or supply-air applications is available from Westinghouse Electric Corp., Box 2278, Pittsburgh, Pa. The fans, called Tubeaxial, are available in seven sizes for ducts and stacks from 18 to 42 ins. inside diameter and in ratings to handle from 2,410 to 36,700 cu. ft. per min.

Separate fan and motor platforms are eliminated on the standard motorized units, and the anchored shaft permits mounting in both horizontal or vertical ducts or stacks. Heavy-gauge-steel construction provides durability; normal maintenance and belt-tension adjustment are simple.

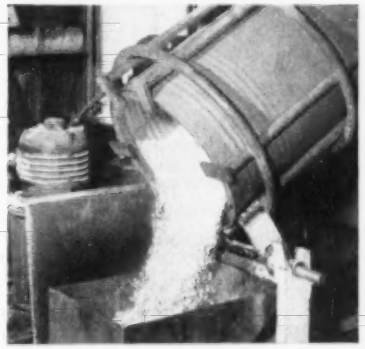
Circle T-21 on Reader Service Card

CONTINUED ON PAGE 148

BRIEFS

on a new dewaxing process for cotton goods...a new drum for sulfides ...a fast way to choose between 50% and 73% liquid caustic soda

New drum for sulfides empties twice as fast



Here's a new 400-pound drum which you can empty twice as fast as previous designs whether you scoop, pour, or shovel.

The drum costs nothing extra and is now standard for both Hooker sodium sulfide and sodium sulfhydrate.

The top opening is a full 18 inches across—four inches wider and 65% greater in pouring area than the previous drum.

This new drum also holds 50 pounds more chemical. With it you can lower handling costs by as much as 14%. You also reduce the storage space required per pound of sulfide. Last, but not least, shipping costs per pound of chemical are lower.

Like the old Hooker drum, this one is designed to preserve product purity. Its special lacquer lining prevents iron pick up during handling and storage. It has six lugs to give a tight seal and reseal. And, we use only brand new drums, never re-fill.

Of course, what goes into the drum is most important. Here are some of our specs:

Sodium sulfide Na_2S—60 to 62%. NaCl—1.5% max. Fe—8 ppm max. Other metals—1 ppm max. Water of crystallization—35% min.

Sodium sulfhydrate NaSH—70 to 72% max. Na_2S—2.5% max. NaCl—0.8% max. Fe—5 ppm max. Other metals—1 ppm max. Water of crystallization—28% max. to 26% min.

The coupon offers technical data sheets on both chemicals for a more complete analysis.

Dewax cotton in a matter of minutes

A British firm recently took out a patent in this country for a solvent-based dewaxing process. It is reported that with this process you can produce absorbent, well-bottomed cotton goods in a matter of minutes.

You begin by dewaxing the fabric in hot *trichlorethylene* inside enclosed vessels. It takes only 30 to 60 seconds' exposure in two baths to come up with goods which hold as little as 0.1% residual wax.

When these baths are finished you flash off the solvent and then reuse the vaporized trichlorethylene.

As a leading producer of trichlorethylene, we are naturally interested in this process. We shall be glad to put you in touch with the patent holder and work with you in setting up a trichlorethylene purchasing and handling program.

We can offer a number of different grades of trichlorethylene for you to choose from and we'll deliver in quantities to satisfy your process and storage requirements.

If you'd like to know a little more about trichlorethylene itself, check the coupon for a technical data sheet.

50% or 73% caustic soda which is the better buy?

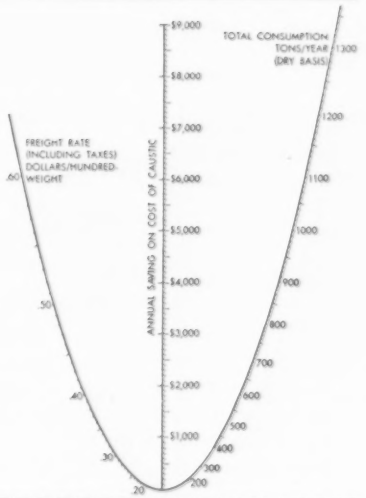
Use this nomograph to find out quickly if you'd save money by switching to 73% liquid caustic soda.

Draw a line from your freight rate to your annual consumption. Any savings will show where you cross the center line.

You'll have to figure in annual depreciation on dilution equipment... we can advise you on this cost.

If you think there's a saving here for you, call in a Hooker man for a complete and more accurate analysis.

And, for more facts like these on buying and using caustic soda, check the coupon for our *Caustic Soda Buyer's Guide*.



For more information, check here and mail with your name, title, and company address.

- ☐ Trichlorethylene
- ☐ Sodium Sulfhydrate
- ☐ Sodium Sulfide
- ☐ Caustic Soda Buyer's Guide

Other Hooker Chemicals:

- ☐ Carbonate of Potash
- ☐ Chlorine
- ☐ Oxalic Acid

When requesting samples, please use business letterhead to speed delivery.

HOOKER CHEMICAL CORPORATION
1711 FORTY-SEVENTH ST., NIAGARA FALLS, N. Y.

Sales Offices: Chicago Los Angeles New York Niagara Falls Philadelphia Tacoma Worcester, Mass.
In Canada: Hooker Chemicals Limited, North Vancouver, B. C.

HOOKER CHEMICALS PLASTICS

For more data, circle A-71 on Reader Service Card

PUT AN END TO *COSTLY*

TENSION TROUBLES

with the *PROVED*

Mount Hope

Automatic

TENSION CONTROL

It's the most ***ACCURATE, DEPENDABLE*** and ***SIMPLEST*** way to ***BEAT TENSION PROBLEMS...***

WHERE IS YOUR TENSION CONTROL TROUBLE?

In a web traveling through a process? Running to a winder? In any coating process in fabric, paper or plastics? Laminating? Yardage control? Tell us about it and we'll try to help you solve it. Mail the coupon below.

Whatever your TENSION-CONTROL problem may be — wherever winding, unwinding or processing operations of any type are performed — the MOUNT HOPE Automatic TENSION CONTROL — will positively operate any type control mechanism to correct your troubles.

IT IS SENSITIVE, ACCURATE AND FAST ACTING — scientifically designed and engineered to provide the split-second tension characteristics that your product may require.

IT IS SIMPLE TO OPERATE, DEPENDABLE and EASILY INSTALLED wherever its needed — in ALL TYPES of OPERATIONS in TEXTILES, PAPER and PLASTICS.

If you have a TENSION PROBLEM mail the coupon below — TODAY!

ACT NOW!

MAIL THIS COUPON TODAY!

MOUNT HOPE MACHINERY COMPANY
50 FIFTH STREET
TAUNTON, MASS.

Gentlemen:

Please send me your new bulletin on the MOUNT HOPE AUTOMATIC TENSION CONTROL.

Name.....
Title.....
Company.....
Address.....
City..... Zone.... State.....

MOUNT HOPE
MACHINERY COMPANY

Plants in TAUNTON, MASS. *and* CHARLOTTE, N.C.

NEW LITERATURE

TEXTILE MACHINERY & AUXILIARY EQUIPMENT

Opening and cleaning—Illustrated guide for reconditioning opening-room equipment from Saco-Lowell Shops. (F-1)

Autoleveller—Users' comments on the Raper machine are given in a 158-p. book from Prince-Smith & Stells Ltd. (F-2)

Nylon support-arm bearings—For roving and spinning frames are described in folder from Saco-Lowell Shops. (F-3)

Speed-measuring instruments—Including a new hand tachometer are described in bulletin from James G. Biddle Co. (F-4)

Custom-designed panels—For electrical control and instrument panels described in folder from Turbo Machine Co. (F-5)

Tramp-iron magnet—Described in folder from Stearns Magnetic Products Div., Indiana Steel Products Co. (F-6)

Electrical switches—Basic line of Micro switches and auxiliary equipment described in enlarged 32-p. catalog from Micro Switch Div., Minneapolis-Honeywell Regulator Co. (F-7)

Woolen spinning frames—Production figures from a large number of mills are given in bulletin covering Simplex frame operations. Davis & Furber Machine Co. (F-8)

Small enclosed switches—New line called E6 and V6 are covered in bulletin from Micro Switch Div., Minneapolis-Honeywell Regulator Co. (F-9)

Drives—Full-color booklet illustrates how V*S drives can be applied to various kinds of machinery. Reliance Electric & Engineering Co. (F-10)

Tensile-strength tester—For low-strength material described in bulletin from W. C. Dillon & Co., Inc. (F-11)

Prefilter—For removing hydrocarbons and water vapor from gas for dryers is described in bulletin from Anders Lykens Corp. (F-12)

Automatic controls—For heating, ventilating, and air conditioning are described in catalog from Barber-Colman Co. (F-13)

Flow tube—For metering corrosive liquids and gases described in bulletin from Builders-Providence, Inc. (F-14)

SUPPLIES & CHEMICALS

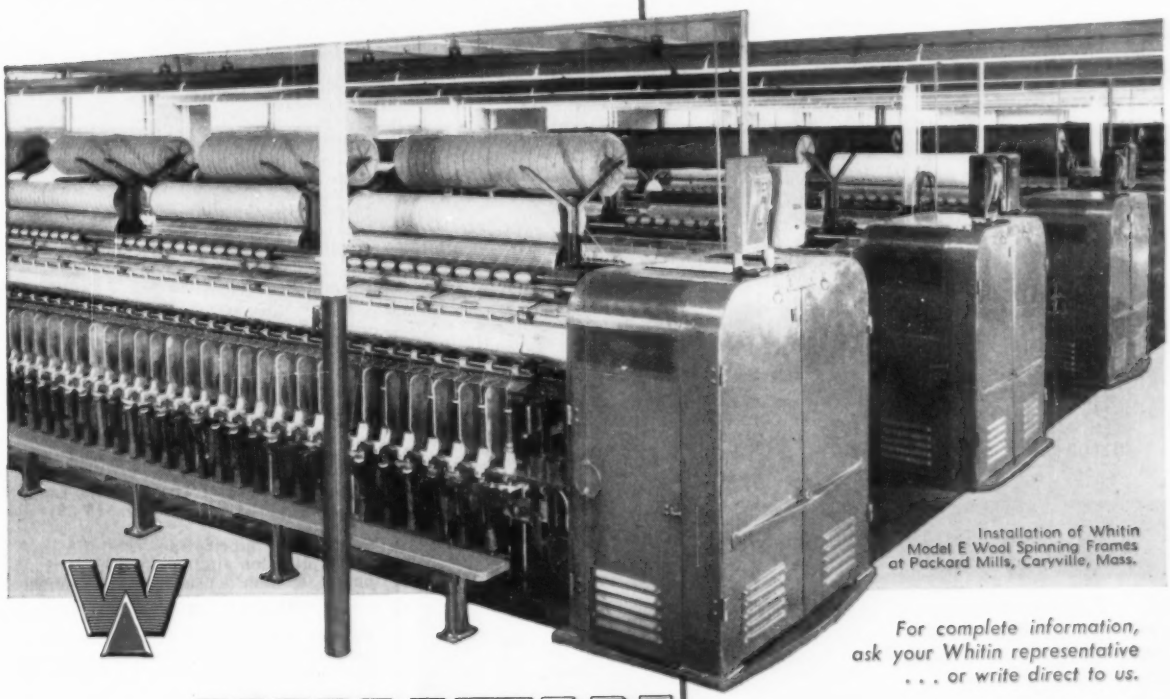
Polyglycol—Revised edition of booklet, "Choosing the Right Polyglycol," from Dow Chemical Co. (F-15)

Emulsifiable polyethylene—Used as a

16 GOOD ways to get BETTER results from the BEST wool frames you ever owned

Whitin Model E Wool Spinning frames have been known for many years as the "work horses" of the industry. Their reputation for efficiency in producing highest quality yarn at lowest cost per pound is firmly established. However, since its introduction to the industry, many new mechanical improvements have been developed which greatly increase its overall performance. Mills which for years have relied upon the Model E now have the opportunity — and at relatively low cost, too — to get better results from these frames by installing a combination of the new parts and accessories now available.

1. "Magic-Grip" drive sprockets 2. Oilless front top roll weight hooks 3. Cylinder replacement pulleys 4. No slip drum covers 5. Simplified application for ring auto-lubrication 6. New upright lay shafts 7. Reworked twister heads 8. Anti-friction twister heads 9. Balloon control rings 10. Anti-friction idler gears 11. Improved thrust box for traverse motion 12. New full-fluted type delivery rolls 13. Adjustable roving guides and nylon B.B. inserts 14. Simplified main shaft bearing assembly 15. New type traverse cams 16. Roving guide traverse motion assembly



Installation of Whitin Model E Wool Spinning Frames at Packard Mills, Caryville, Mass.

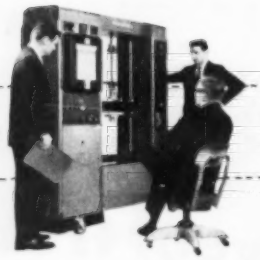
For complete information, ask your Whitin representative . . . or write direct to us.

WHITIN MACHINE WORKS

WHITINSVILLE MASSACHUSETTS,

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

INSTRON



a new dimension in precision fiber testing

Tensile Stress-Strain Properties of Fibers

A new, complete, authoritative 35-page report on the tensile stress-strain properties of eight different fibers, ranging from acetate to wool, is yours for the asking.

Tests, using an Instron, were made on these fibers in air at different temperatures and relative humidities, and in water at different temperatures. In addition, these fibers were studied at various rates of elongation.

Write for Bulletin T-1. It is one of many technical articles covering all fields of testing now ready for you in reprint form.

Discover how Instron's versatility can help you with your problem . . . let us know your field of interest.

INSTRON®

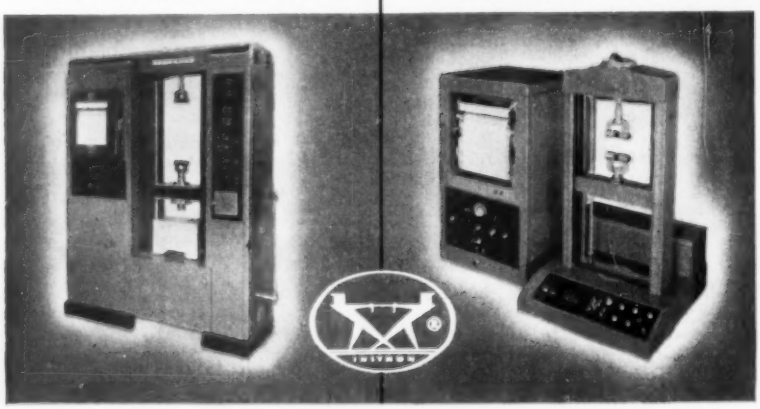
ENGINEERING CORPORATION

2508 WASHINGTON STREET, CANTON, MASS.

EUROPEAN OFFICE: SEEFELDSTRASSE 45, ZURICH, SWITZERLAND

FLOOR MODEL INSTRON — *full scale load ranges: 2 grams to 10,000 pounds.*

TABLE MODEL INSTRON — *full scale load ranges: 2 grams to 200 pounds.*



NEW LITERATURE Continued

textile-finishing agent is discussed in a 16-p. booklet from Semet-Solvay Petrochemical Div., Allied Chemical Corp. (F-16)

Glass valve—Pyrex all-glass Y-valve described in bulletin from Corning Glass Works. (F-17)

Masking tape—Pressure-sensitive tape that withstands temperatures up to 425° F. is described in bulletin by Permacel Co. (F-18)

Fungicides—A quick-reference chart that lists properties and applications of 22 industrial fungicides is available from Heyden Newport Chemical Corp. (F-19)

Acid-resistant ware—Catalog covers 95 polyethylene and nylon products not affected by corrosives. General Scientific Equipment Co. (F-20)

Laboratory balances—All single-pan balances in the Mettler line are listed in bulletin from Fisher Scientific Co. (F-21)

MAINTENANCE & ENGINEERING

Excessive temperatures—Are announced by a protective device that sounds an alarm. Instrument is described in bulletin from Illinois Testing Laboratories, Inc. (F-22)

Insulation—Booklet tells how to test d.c. insulation of electrical equipment. Service Shops Dept., General Electric Co. (F-23)

Electronic controls—New line of instruments described in press release from Foxboro Co. (F-24)

Chains and sprockets—A 154-p. engineering data book is available from Link-Belt Co. (F-25)

Resistance thermometers—For temperatures to 1,000° F. are described in booklet from Leeds & Northrup Co. (F-26)

Roof repair—Data sheet covers use of emergency repair kit for leaky roofs. Monroe Co., Inc. (F-27)

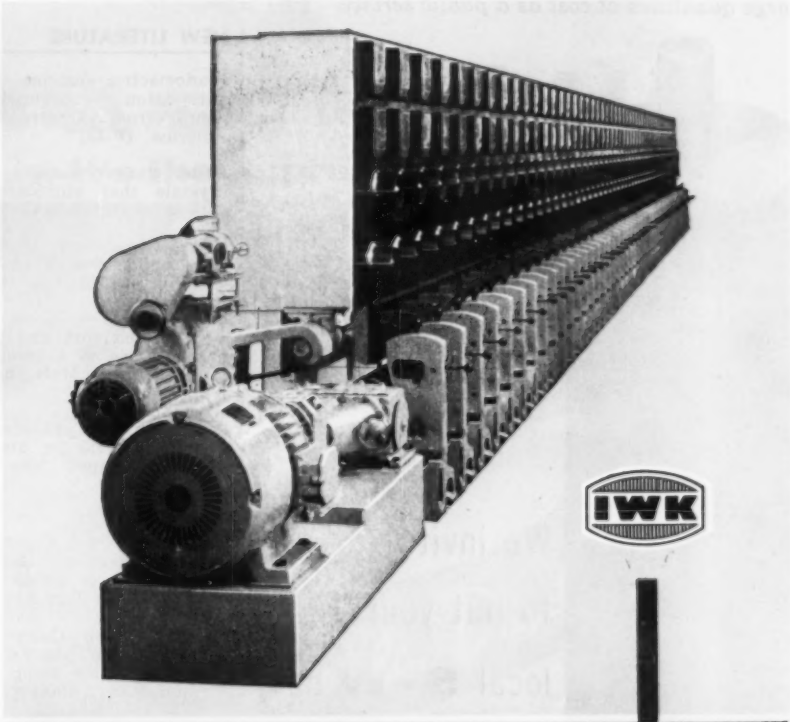
Group relamping—Plan for securing uniform lighting at lower cost is described in booklet from Large Lamp Dept., General Electric Co. (F-28)

Centralized lubrication—Bulletin covers application and advantages of ram-pump system. Lincoln Engineering Co. (F-29)

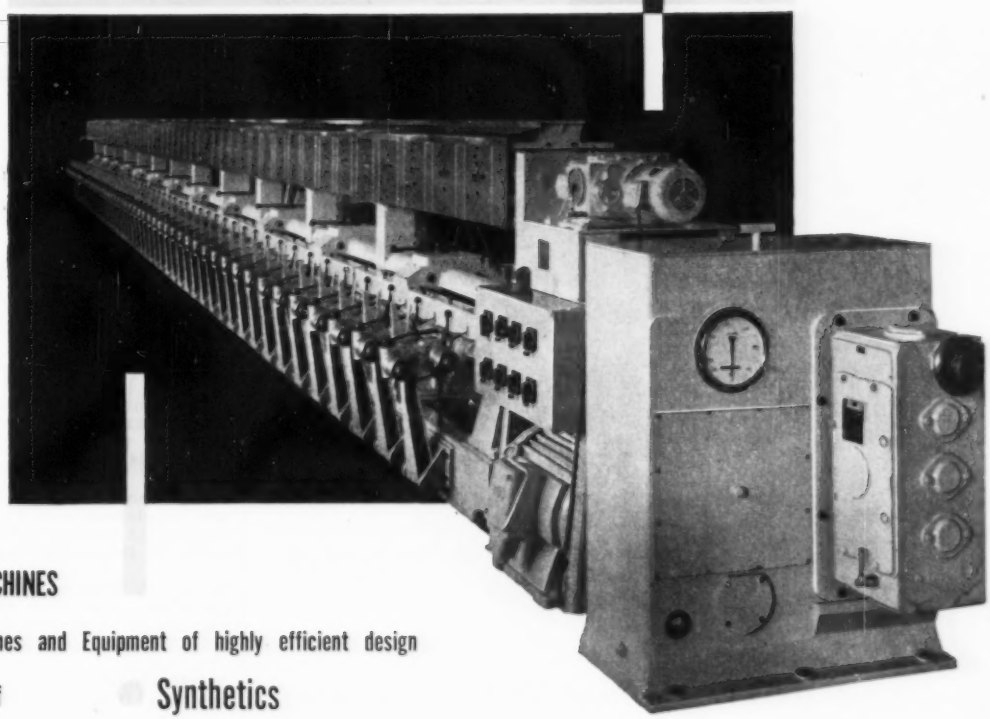
Powder lance—That uses intense controlled heat to cut through concrete and steel is described in bulletin from Linde Co. Div., Union Carbide Corp. (F-30)

Cutting torches—That can be used interchangeably with any fuel-gas combination are described in booklet from Linde Co., Div., Union Carbide Corp. (F-31)

Smoke ejector—That opens automatically in case of fire is described in folder from Swartwout Co. (F-32)



IWK



TAKE-UP MACHINES

Special Machines and Equipment of highly efficient design

for spinning of

- **Synthetics**
- **Acetate**
- **Rayon**

Your inquiries are invited

INDUSTRIE-WERKE KARLSRUHE A. G. — KARLSRUHE/WESTERN GERMANY

Exclusive Distributors NATIONAL INDUSTRIAL MACHINERY CORPORATION—Suite 5119—Empire State Building
350 Fifth Avenue, New York 1, N. Y., U. S. A.

For more data, circle A-75 on Reader Service Card

Whatever you buy
IN TEXTILES "made in U.S.A."
gives quality you can trust
S-W INC.

Stickers for your mail are offered at no charge. Large quantities at cost as a public service.

We invite you to put your local **S-W** man on the SPOT

He can **SPOT** *trouble and* **STOP** *wasted time for recovering rubber rolls if you will use the S-W Roll-Guard Plan.*

S-W INC.

Ask him to prove this in your mill, on your machinery, this month.

STOWE-WOODWARD, INC. Griffin, Georgia · Newton Upper Falls, Mass. · Neenah, Wisconsin

←Circle A-76 on Reader Service Card

NEW LITERATURE Continued

Photoelectric systems—For industrial automation are covered in 24-p. brochure from Electronics Corp. of America. (F-33)

Boiler cleaner—Leaflet describes OXI crystals that eliminate slag, scale, carbon, and soot. OXI Corp. (F-34)

Voltage regulators—Described in booklet from Power Transformer Dept., General Electric Co. (F-35)

Safety valves—Bulletin gives information on selection and installation of relief valves in keeping with ASME requirements. McDonnell & Miller, Inc. (F-36)

Power supply—Catalog sheet describes Regohm system for precision control of power output. Electric Regulator Corp. (F-37)

GENERAL

Public relations—Booklet entitled "The Power of Public Relations" is available from Max Rogel, Inc. (F-38)

Steel strapping—Complete catalog on standard and heavy-duty strapping and accessories from Stanley Steel Strapping Div., Stanley Works. (F-39)

Management training—Folder describes courses available in various areas of training. Amansco Div., H. B. Maynard & Co., Inc. (F-40)

Hand trucks—Booklet tells how to select trucks for specific handling jobs. Lewis-Shepard Products, Inc. (F-41)

Motion picture—Entitled "Fibers and Civilization" that shows the history and development of textiles is available from Chemstrand Corp. (F-42)

California Trade Fair—To be held in April, 1959, is described in brochure from California Trade Fair and Industrial Exposition. (F-43)

Materials-handling techniques—Fourteen case histories reprinted from national business publications along with a handbook on the subject are available from Rapids-Standard Co., Inc. (F-44)

Fringe benefits—Study shows how in 1957 employees averaged $981 in employer-paid benefits. Chamber of Commerce of the United States. (F-45)

Better business methods—Charts, checklists, and other useful information are given in booklet from E. Norman Kagan Co. (F-46)

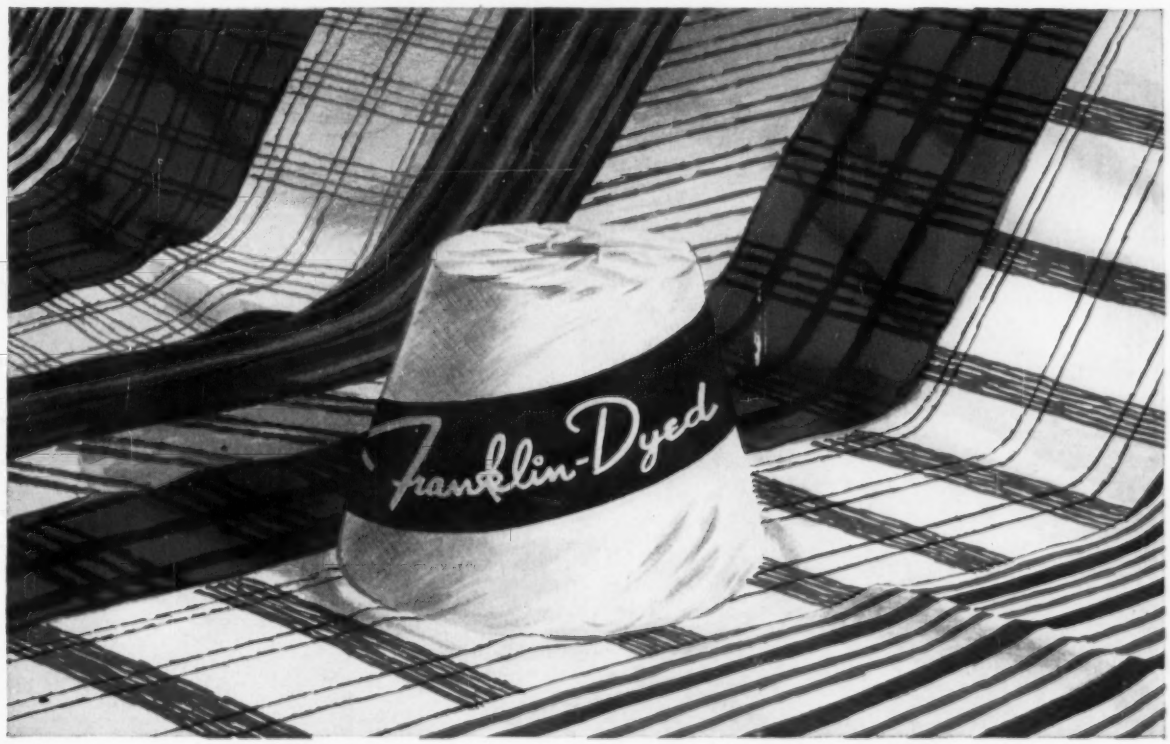
Safety veneer for steps—Described in data sheet from Monroe Co., Inc. (F-47)

Packaging—A 32-p. booklet tells how to merchandise with corrugated boxes. Hinde & Dauch. F-48)

Steel-strap feed—That permits large containers to be packaged at 4½ ft. per sec. is described in folder from Acme Steel Co. (F-49)

Casters—New line of casters with gyro-action bearing in place of a king pin are described in folder from Rapids-Standard Co., Inc. (F-50)

In law it's the Supreme Court...



In colored yarns it's Franklin-Dyed

Yes, with nearly half a century of experience, 4 plants, hundreds of dyeing machines in dozens of sizes, winding equipment to match and complete laboratory facilities, we are widely recognized as the ultimate authority on dyeing all types of spun yarns.

And here are other advantages which make us your logical source for yarn dyeing service:

SPECIALISTS

Yarn dyeing is our specialty. We don't dye just to make yarn sales. Our sole objective is to provide the best yarn dyeing service available.

QUALITY

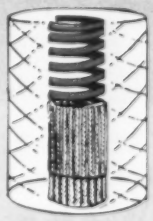
We dye yarns exclusively on the Franklin compressible spring. This permits uniform density of packages, which promotes uniform penetration of the dye liquor and uniform shades.

CONSULTANTS

We can help you with your color problems. Our laboratory facilities, highly skilled technicians and unmatched experience in time, variety and volume are at your service.

CONVENIENCE

Our 4 yarn dyeing plants, in 4 different textile centers, are conveniently yours. Get in touch with our nearest plant or office.



X-ray view of Franklin Package, the "secret" of uniform shades. Don't say "package dyed". Say "Franklin-Dyed".

Franklin Process

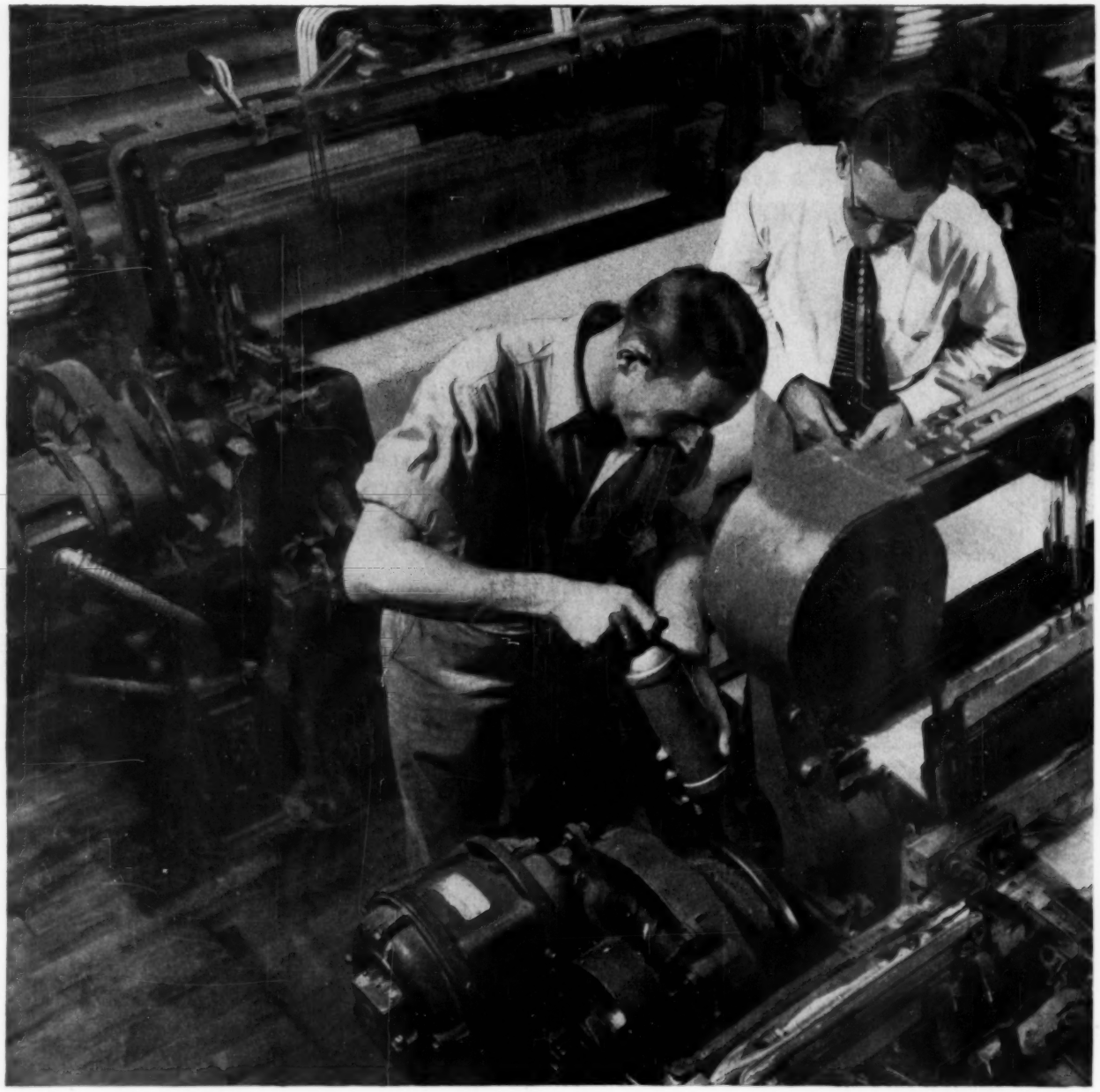
A DIVISION OF INDIAN HEAD MILLS

Dyers of cotton (carded, combed, mercerized) Orlon* (yarn & tow) Acrilan • Dacron** • Ban-Lon® • Helanca • Spun Nylon • Spun Rayon • Blends • Wool and Worsted yarn

Philadelphia • Greenville
Chattanooga • Fingerville, S. C.
New York Office—111 West 40th St.
Providence Office—611 Turks Head Bldg.

7-8

*Trademark for Dupont's acrylic fibre **Trademark for Dupont's polyester fibre



Now for textile mills—a new product to help insure that

NEW GULFCROWN

Here's a completely new multi-purpose, heavy duty, lithium base grease for extreme pressure applications . . . ideally suited for the lubrication of bearings, cams, pick balls and gears in textile looms.

Suited for nearly every type of grease application

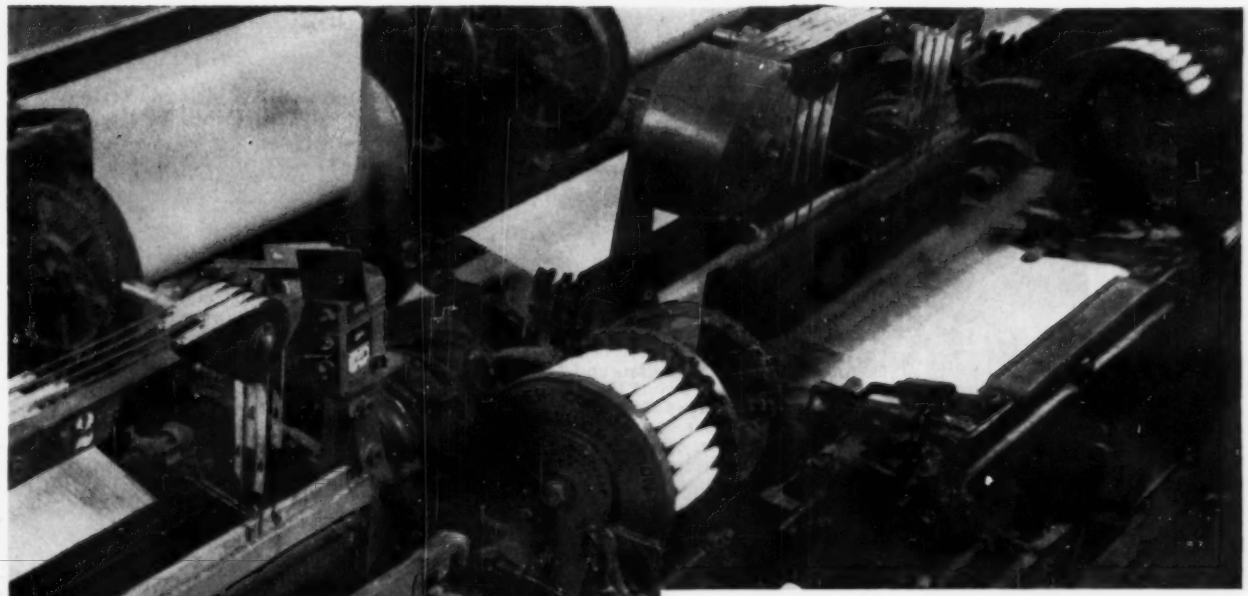
Although this new grease is made to withstand high loads, shock loads and oscillating action, it performs excellently in practically any grease application . . . including electric motor bearings, fan and pump bearings.

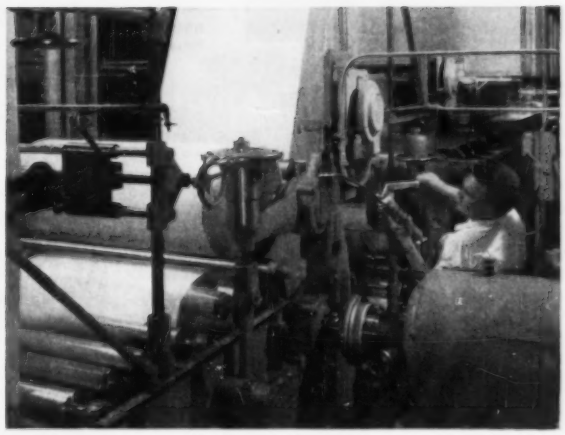
New Gulfcrown E.P. resists heat, cold, moisture and mechanical breakdown. It has excellent oxidation stability and protects against corrosion. Pumps freely at zero Fahrenheit, yet stands up at temperatures up to 250°F. and higher, under certain conditions.

Lets you use less grease—and lubricate less often

In loom lubrication, new Gulfcrown Grease E.P. No. 2 permits a reduction in the amount of grease used—and

For more data, circle A-78 on Reader Service Card





Mercerizing machine bearings—another application where new Gulfcrown Grease E.P. stands up so well. It has exceptional resistance to the wet conditions and exposure to caustic solutions typical of this operation.

Pay-off end of the mill, where better loom lubrication means better cloth. It will pay you to see how Gulf makes things run better—at the looms—with new Gulfcrown Grease E.P.

Gulf makes things run better!

GREASE E.P.

an increase in the period between applications as compared with conventional loom lubricants.

This new grease is now available in three N.L.G.I. consistencies: Nos. 0, 1, and 2. Gulfcrown E.P. No. 2 is the recommended grade for loom lubrication.

Find out how new Gulfcrown E.P. can improve your operation and help you lower maintenance costs. Just call your Gulf Sales Representative at the nearest Gulf office. Meanwhile, mail coupon for booklet.

GULF OIL CORPORATION
Dept. DM, Gulf Building
Pittsburgh 30, Pa.

Please send free booklet on new Gulfcrown Grease E.P.

Name _____

Title _____

Company _____

Address _____

City _____ Zone _____ State _____

NOELTING

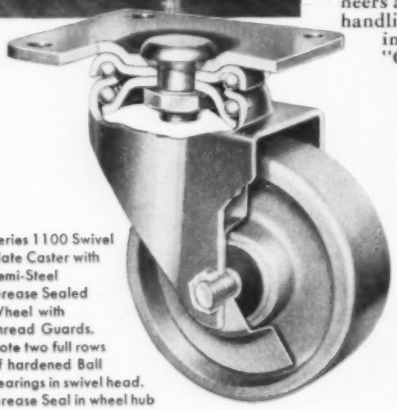
Faultless Casters

assure continuous production . . . at decreased costs

Keeping the spinning machinery continuously supplied with work materials, for most profitable output, requires trouble-free trucks. 64,000 spindles in one mill hit peak efficiency with dependable, smooth running doff-boxes and buggies mounted on Faultless Textile Casters. Faultless 504-4TG Rigid Plate and 1104-4TG Double Ball Bearing Swivel Plate Casters assure fast, low-cost action. Snug fitting, non-binding Thread Guards, especially designed for the textile industry, keep lint out of bearings and prevent string winding around axle bolts—thus avoiding costly delays, while threads and ravelings are removed.

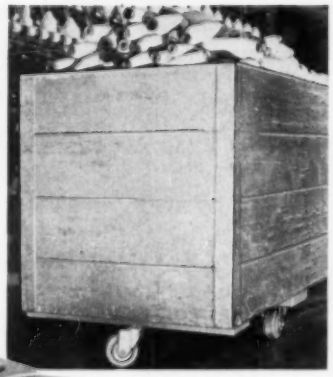
Ask Your Distributor

Your nearby Faultless Industrial Distributor maintains a substantial inventory of Faultless Casters for immediate delivery. He and one of the strategically located Faultless Sales Engineers are available to work with you on every handling problem in your mill. Both are listed in the phone book Yellow Pages under "Casters," beneath the Faultless heading.

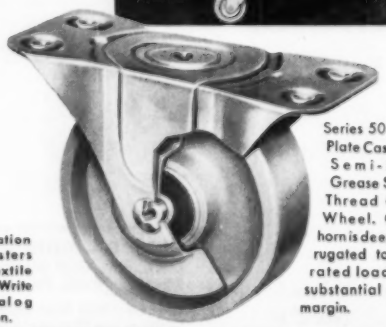


Series 1100 Swivel Plate Caster with Semi-Steel Grease Sealed Wheel with Thread Guards. Note two full rows of hardened Ball Bearings in swivel head. Grease Seal in wheel hub keeps lubricant in—foreign matter out. New style thread guards keep lint out of bearings, string from winding around axle.

NOELTING Faultless Casters



Faultless castered equipment can lead the way to reduced costs and increased production in *your own mill*. Casters for light, medium, heavy and special duties are included in the extensive Faultless line. Faultless wheels for every type floor and load, as well as for special temperature and chemical conditions, are available.



Series 500 Rigid Plate Caster with Semi-Steel Grease Sealed, Thread Guard Wheel. Caster horn is deeply corrugated to carry rated loads with substantial safety margin.

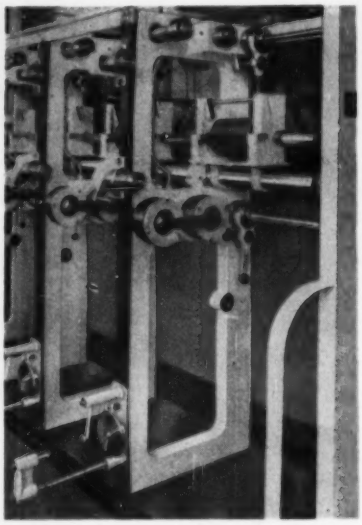
Complete information on Faultless Casters and Wheels for textile use is available. Write asking for Catalog 8157, no obligation.

Faultless Caster Corporation

EVANSVILLE 7, INDIANA

Offices in Atlanta, Boston, Buffalo, Chicago, Cleveland, Dallas, Detroit, Greenville, S. C., Grand Rapids, High Point, Indianapolis, Los Angeles, New Orleans, New York, Philadelphia, Portland, Seattle, St. Louis, Washington, D.C. Canadian Stratford, Ontario

CONTINUED FROM PAGE 138



Heat-Setting Machine

A heat-setting and dipping machine made by T. W. Riley Ltd., Rochdale, England, is designed to operate at 70 yds. per min. and process deniers from 1,500 upward.

Two electrically heated conical units work in conjunction with five grooves on the shell of the units. The increase of the periphery speed of each ascending groove is 3%.

The ingoing tension of the yarn is controlled by a disk brake, and the outgoing tension is controlled by a capstan device driven by a variable-speed gear. A cold-stretching zone is mounted between the ingoing tension device and the hot stretching zone.

Circle T-22 on Reader-Service Card

Open-Width Scouring Machine

A machine designed expressly for the continuous scouring of woolen fabrics in open width has been produced by F. Smith & Co. (Whitworth) Ltd., Whitworth, Rochdale, England.

The machine consists of a series of independent bowls, each supplied with heavy squeeze rolls and powerful pump-fed spray heads. Water is supplied on the counter-current principle; and all necessary controls for speed, tension, and liquor temperature are incorporated in the range.

Circle T-23 on Reader-Service Card

CONTINUED ON PAGE 162

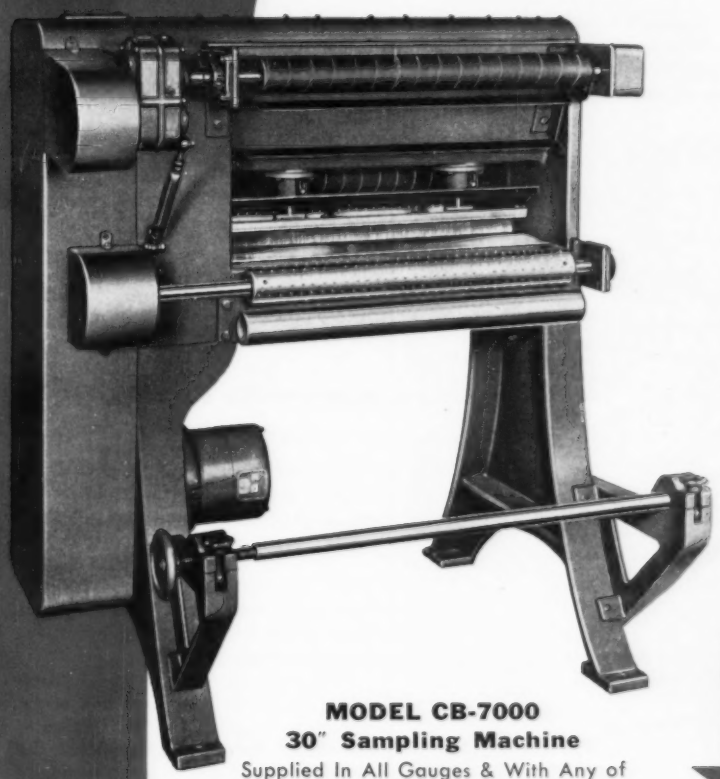
For more data, circle A-79 on Reader Service Card

For more data, circle A-80 on Reader Service Card →

COBBLE
TUFTING MACHINES

Don't Stop Production Machines

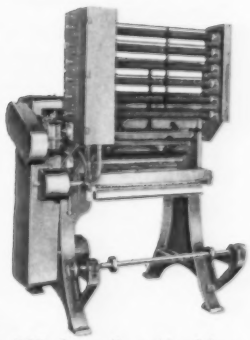
to make samples!



LOOP PILE!
CUT PILE!
LOOP PILE PATTERNS!
CUT PILE PATTERNS!
WAVE LINE!

MODEL CB-7000
30" Sampling Machine
Supplied In All Gauges & With Any of the Following Attachments: Roll Type, Universal Type, Controlled Needle, Alternate Loop/Cut.

WRITE, WIRE OR PHONE FOR INFORMATION ON THE COMPLETE LINE OF COBBLE TUFTING MACHINERY



30" Sampling Machine with 6 Roll Pattern Attachment

CB **COBBLE BROS. MACHINERY CO.**

RIVERSIDE DRIVE • PHONE OX 8-3481 • CHATTANOOGA, TENN., U.S.A.
GATE STREET WORKS • BLACKBURN, LANCASHIRE, ENGLAND

OVERSEAS AGENTS: ANDRE MANUEL, 82 Blvd. Haussmann, Paris 8, France - NOEL P. HUNT & CO., Pty. Ltd., 1-11 Hawke St., Melbourne C1, Australia

CONTINUED FROM PAGE 52

lettering dobby mounted overhead that was weaving names in the center of a terry towel.

James Hunter's new parallel motion was running on a mock-up picking motion and is said to give shuttle-flight accuracy by a power-stroke travel within 0.010 in.

A portable warp-typing machine for very coarse yarns was demonstrated by Edda International Corp. The machine, Titan GK-6BX, ties warp yarns for papermaker's felt, tire cords, and carpets. Coarse yarns that have been tied satisfactorily with the machine are wool, worsted, jute, rayon, and nylon.

Many Firms Have New Pickers

New pickers, in both drop-box and loop models, were shown by Gates, Garland, Dayton, Slip-Not, Schmidt, and Denman. These pickers are in various combinations of new and improved plastics and are said to last many times longer than pickers used in the past.

Graton & Knight has a new flat belting laminated from chrome leather with a laminated plastic core that's said to have high tensile strength and is oil and moisture resistant. It is used on slubbers, intermediates, and other machines.

Steel Heddle showed two new reeds: a combination reed and an armored reed. The reeds give maximum dent flexibility, strength and rigidity.

Pioneer Heddle showed (1) a standard heddle made for its Draw-Rite frame and (2) a stainless-steel heddle for filament man-made-fiber yarns.

Louis Batson and Batson Mfg. Co. showed felt-cushioned binders, laminated picker sticks, and dobby-cord ends.

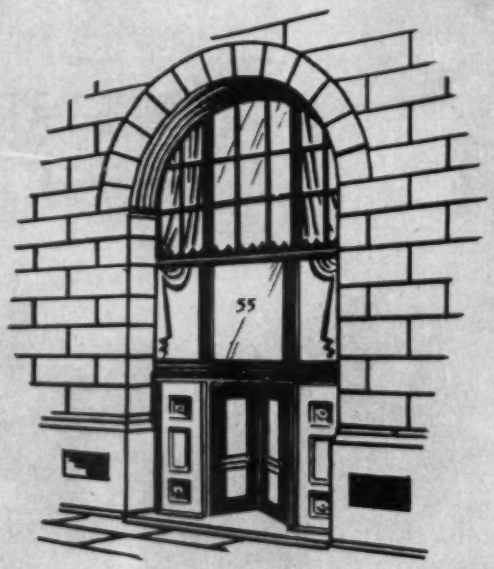
Starch chemists have produced a number of new products that are better adapted to specific purposes.

Now available are noncongealing starches that remain fluid at 1 to 1½ lbs. per gal. at room temperature.

Two companies featured cationic starches that work well as sizing materials for man-made fibers or can be used as finishing materials that are durable to laundering.

Our service is tailored to provide all the working capital any qualified client needs, without increased borrowing, diluting profits or interfering with management.

Information available for any manufacturer or distributor with $500,000 or more annual sales.



Textile Banking Company

55 Madison Avenue, New York 10, N.Y.

Providing operational financing for the apparel, electronics, furniture, leather, plastics and textile industries.

Subsidiaries:

T. B. C. Associates, Inc., New York Southwest Texbanc, Inc., St. Louis

POINTERS FOR SUPERVISORS

CONTINUED FROM PAGE 101

same kind of situation? Have other employees done the same thing? If so, what action was taken in their cases?

These are only a few of the questions that should be answered; but they suggest the kind of investigation that should be done, not after the discipline but before.

You may say that this investigation takes too much time and that when discipline is called for, fast action is also called for. My reply is that the situations are rare when immediate action is demanded and that in the end you will save time by taking the time to get your facts before you act.

3. Determine the Right Disciplinary Action

This, of course, is not easy and it is the crux of your problem.

To meet this problem, some companies have established quite elaborate

For more data, circle A-81 on Reader Service Card

EASY, FAST CURE FOR "COASTING" FRAMES!

Your roving or spinning frame motor acts as its own brake when used with this

NEW Qwik-Stop CONTROL

"Coasting" frames waste time, material and money. But it's often difficult and expensive to add conventional brakes to existing frames.

This new **Qwik-Stop** electric braking control is the answer. It requires no frame modification. Simply replace your motor starter with this unit and *presto*—you have brakes. A wide variety of braking torque is available by a simple jumper reconnection. Dependable timing of braking cycle with easily adjusted pneumatic timer.

Write for Bulletin 8922 which gives the complete story. Address Square D Company, 4041 N. Richards Street, Milwaukee 12, Wisconsin.

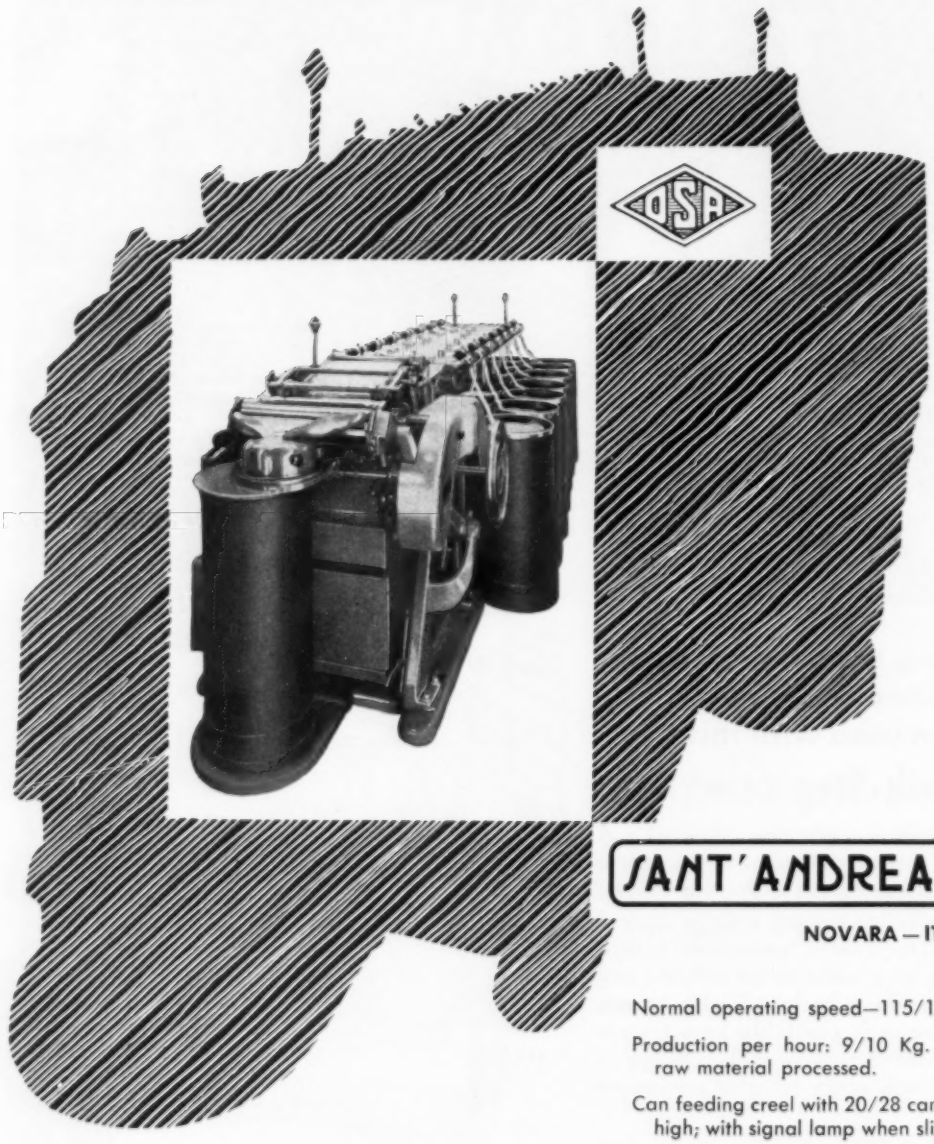
This **Qwik-Stop** unit provides complete control for starting, protecting and braking roving or spinning frames.

NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE!

SQUARE D COMPANY

HEAVY-DUTY RECTILINEAR COMBING MACHINE (Patented) Model PSL.

Greater production
Greater yield (less noils)
Better combing action and cleaner top.



SANT'ANDREA NOVARA

NOVARA — ITALY

Normal operating speed—115/130 nips per minute.

Production per hour: 9/10 Kg. approx., according to raw material processed.

Can feeding creel with 20/28 cans ϕ 400 mm. x 900 mm. high; with signal lamp when slivers break.

Nippers with special covering and adjustable safety device.

Automatic device (patented) to clear the top comb.

Delivery with special turning head, automatic stop motion and signal lamp when slivers break.

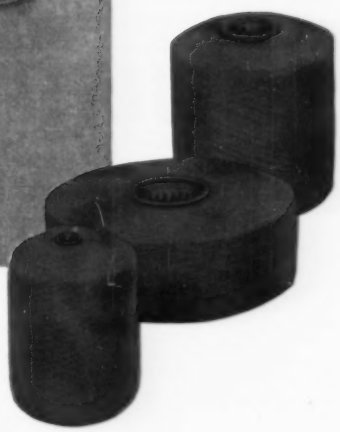
Delivery into 1 rotating can, ϕ 400 mm.

U.S.A. Representative:

ERNEST L. FRANKL ASSOCIATES — 515 Madison Avenue — NEW YORK 22.

For more data, circle A-83 on Reader Service Card

Modern Turbo Smith-Drum Package Dyeing Equipment in the new Coats & Clark plant at Toccoa, Ga.



Modern Mill . . . EFFICIENT PRODUCTION . . . Modern Smith-Drum Dyeing Equipment

Smith-Drum leads the field in high-temperature, high pressure dyeing equipment. Here are a few reasons:

— A sample-package-kier that permits actual operating condition sampling without interrupting main lot dyeing.

— A high-pressure-dye-feed-kier which allows dye bath additions without pressure or temperature changes in the main body of the dye liquor.

— Quick heating and cooling with a Smith-Drum Heat Exchanger located *outside* the main dye liquor circuit, for easy access.

— Fabrication in accordance with code requirements.

And — the priceless, practical experience of Smith-Drum engineers.

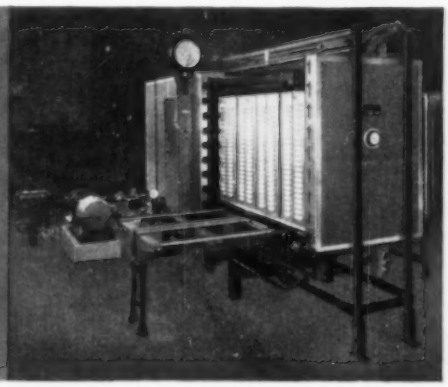
Whether it's package dyeing, or paddle dyeing — rotary dyeing, or circulating dyeing — extracting or drying, if it has to do with textile processing, call on Smith-Drum.

Smith-Drum Division
TURBO MACHINE COMPANY
Lansdale, Pa.

SOUTHERN SALES REPRESENTATIVES:
Parrott & Ballentine, Greenville, S. C.

Turbo FS-300 Steam Setter

One of a famous line of heat setting and textile processing machines, the Turbo FS-300 is a combination, all-purpose steam setter. It is adaptable for yarns, fibers, sweaters, other garments and fabrics. Featuring Turbo Push-Button operation, it takes the guesswork out of setting — helps you get top-quality production everytime, all the time. Full information on request.



disciplinary procedures that spell out what will happen if a specific offense is committed a first time, a second time, and so on. Usually, in these procedures, offenses or violations are graded as to their seriousness.

The great virtue of this approach is that it goes a long way towards assuring equal treatment of employees who are guilty of the same errors of conduct or performance. It should be recognized, however, that in any such procedure, no matter how carefully devised, it is difficult to anticipate and plan for every conceivable set of circumstances and to take account of variations in individual length of service, performance, capability, and the like. In the end, judgment is required; so again we come back to the supervisor's responsibility.

How do you know what is the right disciplinary action? Frankly, I can't answer that question, and I would be impertinent if I did so. I can, however, suggest certain information you should have and weigh in reaching your decision.

As we have discussed, you should have a good grasp of the facts. You should know the employee's past record. You should have knowledge of how to motivate the particular employee involved (remembering that the objective of discipline is improved performance and better attitude). You should know the normal company practice in dealing with comparable situations.

Even with all this knowledge, the decision is not easy and will not always be right. Without it, the chances are pretty good your decision will be wrong.

4. Explain Your Action To the Employee

If any good is to be served, the employee must understand exactly why he is being disciplined. He must know where he got out of line and what he must do to satisfy you in the future. This point ties in with the concept that the purpose of discipline is improvement, not punishment. The probabilities of accomplishing this objective are certainly better if the employee understands the where, what, when, and how of the trouble he is currently in and what will be expected of him in the future.

The art of discipline is not easy to come by. Knowledge and facts are helpful, but not enough. In addition, you need some diplomacy, some sensitivity to the reaction of others, the objectivity to appraise all the circumstances, and the patience to weigh the various considerations before you act.

Acquiring skill in the art of discipline requires time and experience, but it is an essential skill for the good supervisor.

The ULTIMATE in PACKAGE DRYERS

GASTON COUNTY-AVESTA recirculating RAPID DRYERS are built under U. S. Patent No. 2,567,940 and R.E. 24,260 through a license agreement with Avesta Company in Sweden.

Custom built to individual mill requirements in "Single Kier" or "Multiple Kier" arrangements for 250 to 1,000 or more pounds of yarn. Design determined by package carriers in customer's plant regardless of make.

CONSTRUCTION

Built to ASME standards. Piping systems, heater housings, condenser housings, reversing valves and drying kiers made of stainless steel. Kier lid of stainless or carbon steel as specified. Heater and condenser coils made of heavy curpo-nickel alloy tubing for long service life.

Send for detailed technical data and drying cycles based on your production.

ADVANTAGES

1. Better yarn quality
2. Short drying cycles
3. Completely automatic operation
4. Low labor costs
5. Low power consumption
6. Low steam consumption
7. Eliminates costly air filters
8. No contamination from atmosphere
9. Eliminates expulsion of hot air into dyehouse
10. Allows more efficient use of package carriers
11. Accelerates flow of material through dyehouse
12. Faster delivery of finished product to customer
13. Allows smaller inventory of finished goods
14. Reduces overall costs of dyehouse operation

GASTON COUNTY DYEING MACHINE CO.

Pioneers In Automatically Controlled Dyeing Machinery

STANLEY, NORTH CAROLINA

Gaston County Dyeing Machine Co. A. R. Breen, Terminal Bldg., 68 Hudson St., Hoboken, N. J., G. Lindner, Mgr. — 80 E. Jackson Blvd. Chicago, Ill. — Albert P. March, Whitemarsh, Pa., Philadelphia AD 3-2901 — The Rudel Machinery Co., Ltd 614 St. James St. W., Montreal 260 Fleet St. E., Toronto

J. R. Angel, Mortgage Guarantee Bldg., Atlanta, Ga.

ELECTRIC-POWER BILLS

CONTINUED FROM PAGE 67

low power factor. In many instances, motors and inductive equipment are oversized; therefore they are lightly loaded and cause low power factor. In these instances, you can correct the power factor by exchanging motors.

How To Correct Power Factor

If oversize motors are a result of high-torque requirements, you can install static capacitors with the motors to correct the power factor. Capacitors can also be used at bank centers to correct groups of equipment.

Generally they should be applied as near poor power-factor loads as pos-

Here is good news for everyone who is watching cost control . . . or should be!

Non-Staining THILCO-TUF — saves Textile Manufacturers thousands of dollars yearly on heavy duty wrappings of carpets, upholstering and bulk fabric shipments. It is a tough, *duplex type single wrap* that eliminates costly double wraps and permits wrapping *only once* to get all the protection desired. THILCO-TUF features two sturdy kraft outer sheets bonded together with an exclusive blond laminant which *does not stain!* It is tough, pliable and extremely resistant to punctures, tears, moisture, grease and oils. THILCO-TUF is available in a range of standard grades, reinforced or poly-coated to meet every protection requirement — Plain or trademark decorated to any needs.

Write For Free Sample Kit

Tells you all about this Thilco exclusive protective wrap. Contains samples of 4 standard utility and extra heavy grades—Plain, Reinforced, Poly-coated, and Print-Decorated

THILCO HAS A FULL RANGE OF TEXTILE WRAPS

Thilco's complete line of Textile Papers includes lightweight Krafts, tissues and other wraps in numerous weights and grades in single and duplex combinations. ALL THILCO PAPERS CAN BE PRINT-DECORATED for Brand Name identification and promotional advantages.

THILCO
Functional Papers
THILMANY PULP & PAPER COMPANY
KAUKAUNA • WISCONSIN

OFFICES
NEW YORK
CHICAGO
BOSTON
DETROIT
CINCINNATI

For more data, circle A-86 on Reader Service Card

Introducing...

the ALL-NEW

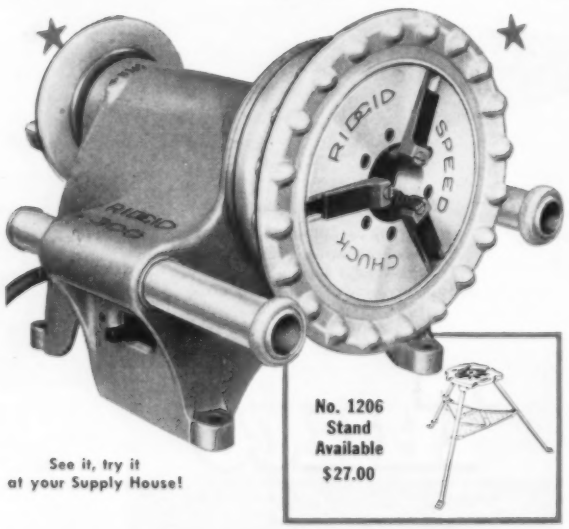
RIDGID 300

Power Drive

$199.50

- Full ⅛" to 2" capacity
- Light-Weight · Heavy-Duty
- Unmatched RIDGID Quality

Patents Applied For



No. 1206 Stand Available $27.00

See it, try it at your Supply House!

Designed and Manufactured by

THE RIDGE TOOL COMPANY

ELYRIA, OHIO, U. S. A.

For more data, circle A-87 on Reader Service Card

TEXREZ EXTENDER G

Essential to an improved finish!
Gives desired "Hand" to fabrics!

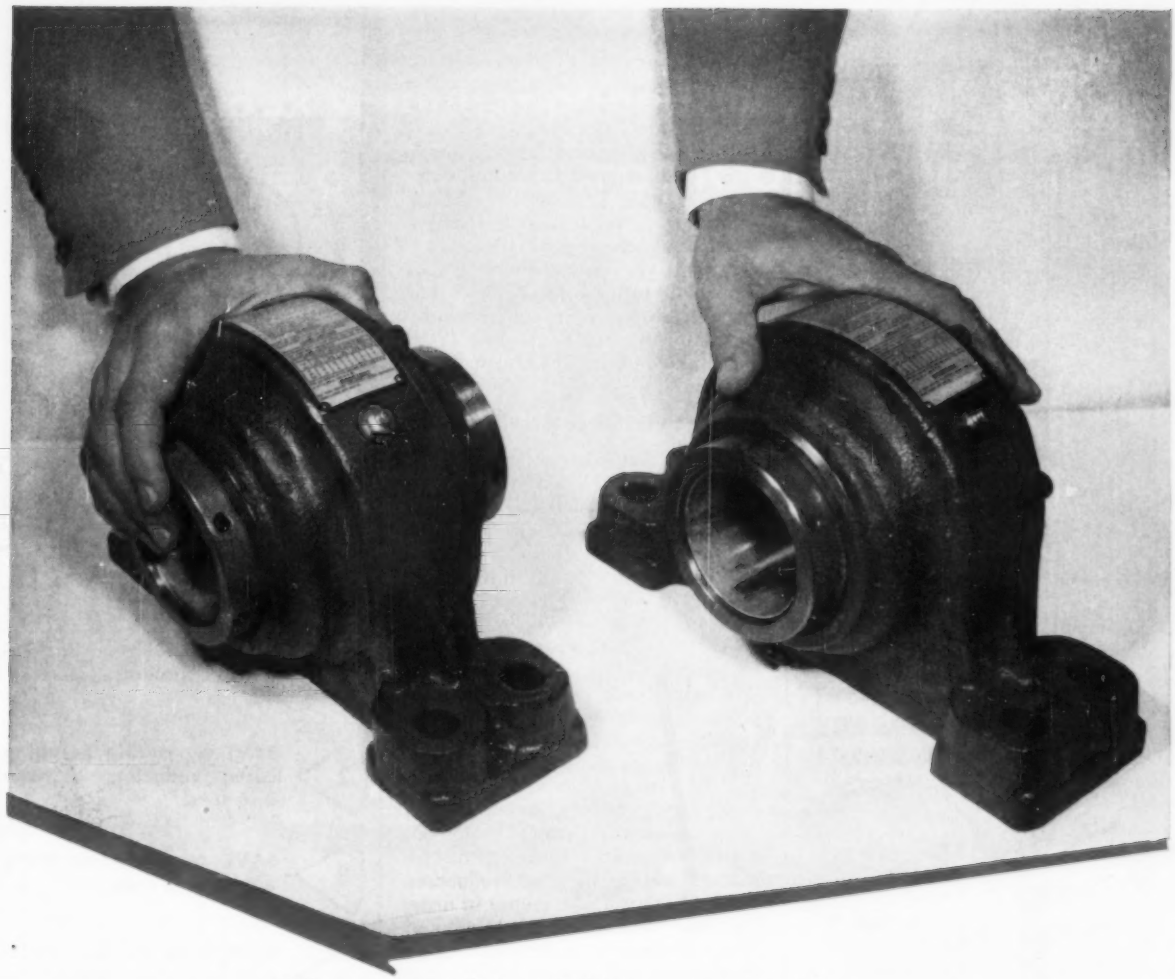
- builds "hand" on crease-resistant fabrics!
- when reacted with thermo-setting resins . . . outlasts repeated washings!
- economical to use: tremendous body-building properties that cost **so** little!
- cold water soluble . . . quickly forms fluid, stable solutions!
- all films are colorless, transparent!

STEIN HALL

285 MADISON AVENUE NEW YORK 17, N. Y.

MUrray Hill 9-0800

For more data, circle A-88 on Reader Service Card



There's a big difference in these pillow blocks . . . Dixie Bearings, Inc. knows the difference. Do you?

One of these pillow blocks contains a non-expansion or "fixed" bearing unit. The other is an expansion or "floating" bearing. Mix them up—order a "fixed" bearing where conditions dictate an expansion unit—and you are in trouble. Bearing failure in a very short time is almost certain.

One of our customers recently ordered spare bearings for new equipment and overlooked that important difference. They allowed us to check their survey of bearing requirements against the actual bearings installed on the equipment. We found on many applications "floating" units were required and their order failed to specify this vital point. Savings in time, trouble and money for our customer by this simple check were important.

Let us help *you* survey your bearing requirements—let us check the actual bearings in your equipment and we will be ready with the correct bearings you need when you need them. Call or write our branch nearest you now!

Providing bearing service in the South ➤ **DIXIE BEARINGS, INC.**

FLORIDA: Jacksonville • **GEORGIA:** Atlanta • **KENTUCKY:** Louisville • **LOUISIANA:** Baton Rouge • New Orleans
N. CAROLINA: Charlotte • Greensboro • **S. CAROLINA:** Greenville • **TENNESSEE:** Chattanooga • Kingsport • Knoxville • Nashville

and

in the North ➤ **BEARINGS, INC.**

OHIO: Akron • Canton • Cincinnati • Cleveland • Columbus • Dayton • Elyria • Hamilton • Lima • Lockland • Mansfield • Toledo • Youngstown • Zanesville
INDIANA: Ft. Wayne • Indianapolis • Muncie • Terre Haute • **PENNSYLVANIA:** Erie • Johnstown • Philadelphia • Pittsburgh • York
WEST VIRGINIA: Charleston • Huntington • Parkersburg • Wheeling • **NEW JERSEY:** Camden
NEW YORK: Buffalo, Balanrol Corp. • **MARYLAND:** Baltimore • **DELAWARE:** Wilmington

KNOCK OUT STATIC!

YOU WON'T MISS WITH A SIMCO "MIDGET"

There is a SIMCO "*Midget*" static bar designed for every textile application . . . *guaranteed* to eliminate static . . . safely . . . effectively . . . inexpensively! New *shockless* bars are also available. Equip your machinery *now.*

the SIMCO company
920 Walnut St.
Lansdale, Pa.

Circle A-90 on Reader Service Card

sible so that the resultant correction will improve the value of your plant's electrical-distribution system by increasing its current-carrying capacity.

Synchronous motors to replace induction motors may also be an excellent solution. A synchronous motor with a leading power factor can sometimes be used both as an efficient prime mover and a corrective device to improve over-all power factor.

Perhaps you cannot improve your plant's load factor or power factor but you can reduce your power bill by eliminating waste uses of power. Turn off lights not being used, close all air valves not in use, etc.

More Power Increases Efficiency

A better method of doing a job electrically may not always result in reducing your power bill. But it will usually contribute to the over-all economy of your plant. If higher levels of illumination will result in increased production, you should consider fluorescent lamps or mercury vapor lamps, which are twice as efficient as filament lamps.

Where direct current for certain processes is now being supplied by old rotating rectifiers, modern rectifiers will do the job much more efficiently and the savings in power cost might easily justify the new investment. In many instances, infrared heating can replace conversion furnaces to save wattage and to increase production.

Electricity can save money in many ways over the cost of other forms of energy, including manpower. Your electric bill will go up rather than down when more electricity is used to displace less efficient forms of energy, but the over-all cost of your manufactured product will decrease.

KEEP LAY GUIDES ALIGNED

CONTINUED FROM PAGE 58

ers. It will also be harder to keep the swords and crank arms tight.

When you install or replace a lay guide, the lay centering gauge should be used to position the swords correctly on the rocker shaft. If this centering is not done, the swords or lay-guide followers may bind and cause unnecessary wear and strain to the rocker shaft, lay guide, lay-guide followers, crank arms, and other parts.

Adjust the Lay Guide This Way

Old-model looms have a fixed lay guide; but later models have adjust-

cut production COSTS 4 ways! . . . with MECHO AIR GUIDER

1 SAVE by eliminating expensive spoilage!

2 SAVE by cutting handling costs, reducing damage and loss!

3 SAVE by reducing costly equipment repairs!

4 SAVE with the low initial and operating cost of the Mecho Air Guider!

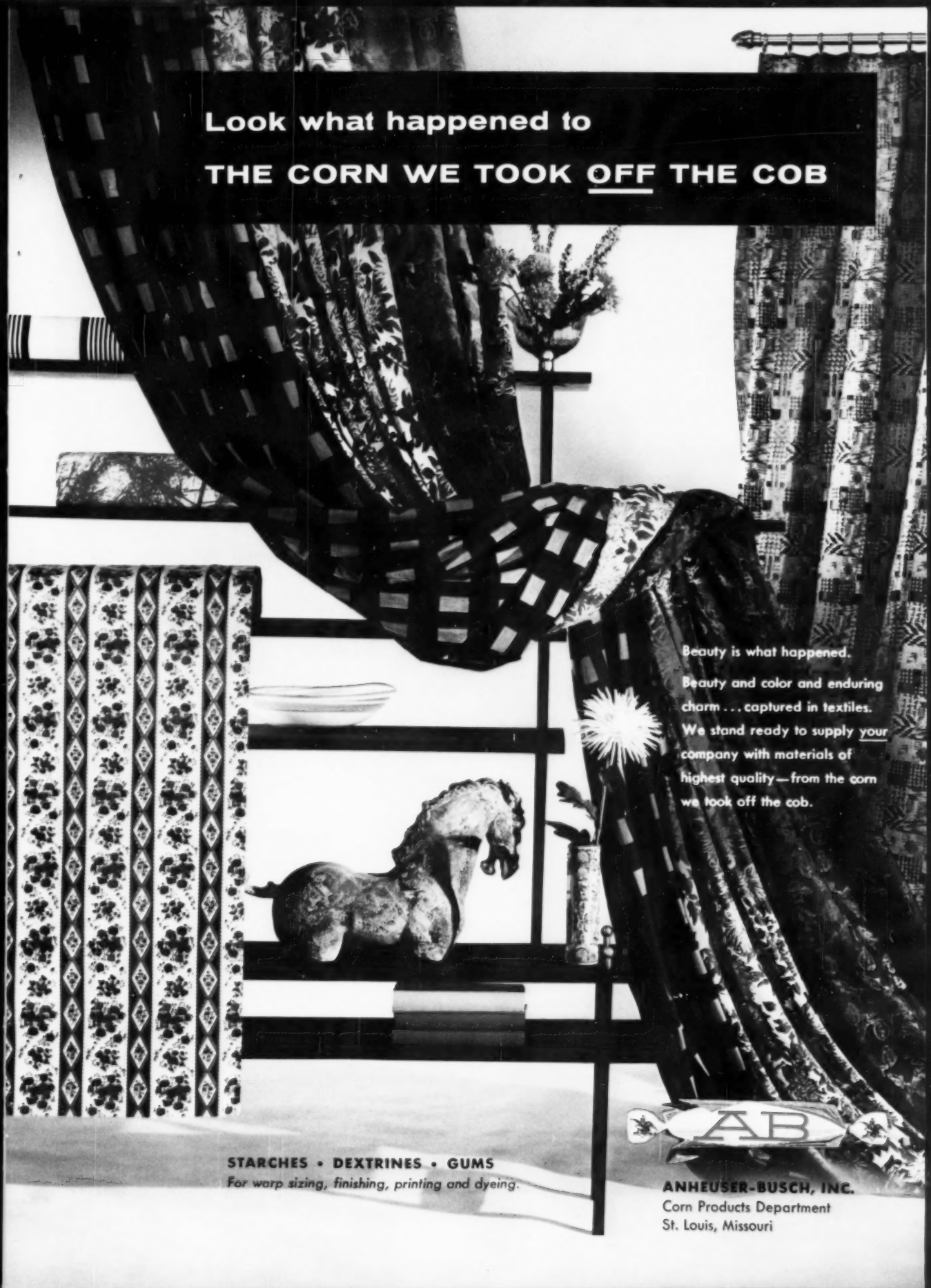
Hundreds of finishing plants bless the simplicity of operating a Mecho Guider . . . no complicated counter-weights or linkages! The sensitive selvage finger points the way to important savings! It handles every imaginable fabric from the lightest to #8 duck; is used in plants handling woven and non-woven fabrics, semi-rigid plastics, artificial leather, rubber, felt and gauze. Constant cloth alignment is maintained at all times.

The precision-engineered accuracy of the Mecho Air Guider, guiding to within an eighth of an inch and ranging from 1 to 400 ypm, is unsurpassed! Stainless steel, acid and moisture-resistant units with sealed bearings are also available.

Mecho offers a valuable Guiding Service. Phone, wire or write for your catalog today. Learn how the Mecho Air Guider can save dollars for you.

GUIDER SPECIALTY COMPANY
431 W. Rock Ave.
New Haven 15, Conn.

Circle A-91 on Reader Service Card


Look what happened to
THE CORN WE TOOK OFF THE COB
Beauty is what happened.
Beauty and color and enduring charm . . . captured in textiles. We stand ready to supply your company with materials of highest quality—from the corn we took off the cob.
AB
STARCHES • DEXTRINES • GUMS
For warp sizing, finishing, printing and dyeing.
ANHEUSER-BUSCH, INC.
Corn Products Department
St. Louis, Missouri

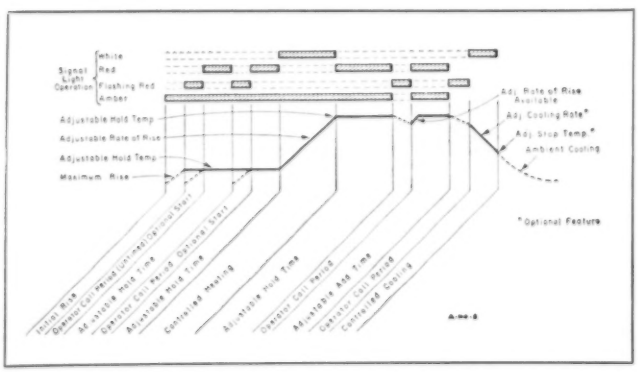
Introducing the new Taylor

FULFLEX* DYE CYCLE CONTROLLER

Gives maximum adjustability for any dyeing cycle . . . in a single case!

Here is a really outstanding development in dyeing control. The FULFLEX Dye Cycle Controller gives you maximum flexibility, providing as much or as little automatic control as required.

This new instrument embodies all the qualities of dependability, long life and ease of maintenance that have made Taylor instruments so popular in the Textile industry. Check the features listed here, then ask your Taylor Field Engineer for full details, or write Taylor Instrument Companies, Rochester, N. Y., or Toronto, Ont.



Typical cycles that can be obtained with the new Taylor FULFLEX Dye Cycle Controller

- Adjustable starting temperature
- Adjustable initial hold time
- Adjustable rate of rise
- Adjustable hold temperature
- Adjustable hold control times
- Adjustable add periods
- Adjustable forced cooling
- Adjustable end temperature
- Greater flexibility

*Trade-Mark

Taylor Instruments MEAN ACCURACY FIRST

able, reversible guides. The lay guide is bolted to the inside of the right-hand loomside. When the lay guide is installed, leave the adjusting nuts loose; then with the lay on front center, tighten the front bolt of the guide. Move the lay to back-center position, and tighten the back bolt. Have the lay-guide followers overhanging the guide equally at top and bottom.

The followers should bear evenly on the guide without binding. With the lay on front center, tighten the adjusting nuts to position the guide between the followers. Move the loom by hand to check for free operation of parts before starting the loom.

Every time an adjustment is made to the lay, lay guide, swords, or rocker shaft, the filling-changing mechanism should be closely checked before the loom is put back into operation. A slight variation in the position of the lay can cause a big difference in the way the bobbin is placed in the shuttle.

The lay guide should be checked when a loom does not change filling correctly, slams off, swords are loose, or side lash is noticed in the lay or the rocker shaft.

Inspect the Lay Guides Regularly

But it is best to practice preventive maintenance with the lay guides as with other vital parts of the loom. Don't wait until troubles develop before taking action. Next to having the lay guides correctly aligned, the most important thing is to keep them well lubricated.

Oil will drip from the lay guide and followers or will collect lint and dirt. The best lubricant is a light-bodied grease. Place a coating of the grease on the lay guide with a paddle or brush. One reason the lay guide is neglected is because it is hard to reach with a warp in the loom. But don't wait until the warp runs out to lubricate it unless the warp runs for only a week or less.

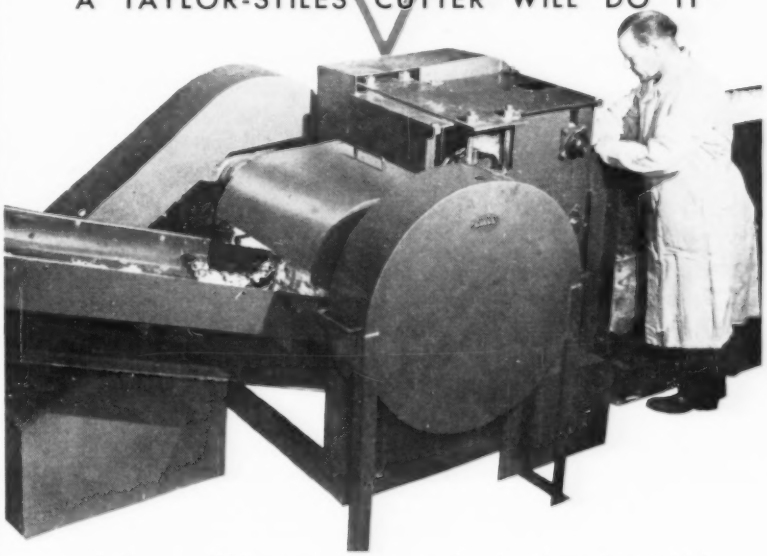
Periodical inspection will help keep the lay guides and followers in good condition. With the loom stopped, place your hands on the reed cap and shove sharply to the right and then to the left to see if there is any end play. Reach down between the loomside and the warp to see if the lay guide, followers, and bolts are tight.

Feel with your fingers to find any worn places in the guide that denote a need for adjustment. At the same time, check the condition of the lubrication.

Since the lay guide is located in a hard-to-reach place, the loom motor should be stopped or the safety lock engaged before you check it or do any work on it.

Can YOU cut SYNTHETIC YARN evenly like this?

A TAYLOR-STILES CUTTER WILL DO IT



Cutting synthetic yarn into even lengths is quite a trick. Taylor-Stiles engineers have mastered it. Taylor-Stiles staple cutters cut tow or continuous filament synthetic yarns into even lengths.

And they do the job cleanly, and without fusing that leaves hard lumps, which are such a source of trouble in spinning.

Taylor-Stiles staple cutters may be adjusted to cut a variety of lengths from 1/32" up to as great as 4".

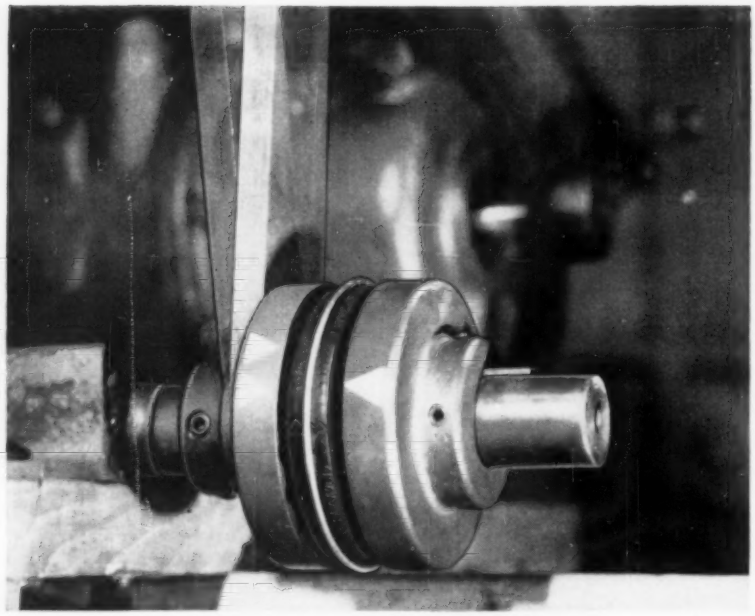
For full details regarding these efficient, widely used machines write today for illustrated folder.

TAYLOR, STILES & COMPANY

15 BRIDGE STREET RIEGELSVILLE, New JERSEY

← For more data, circle A-93 on Reader Service Card

For more data, circle A-94 on Reader Service Card



NEW WOOD'S SURE-FLEX COUPLINGS SHOW NO FATIGUE AFTER 6 MILLION 15° DEFLECTIONS AT PEAK TORQUE!

New, Wood's Sure-Flex Couplings recently were submitted to severe tests to determine their ability to absorb destructive shock and vibration. They were deflected a full 15° at peak torque once per second, 24 hours per day, continuously for over 71 days. After more than 6¼ million cycles, they were examined and found to show only negligible signs of wear in the flexible sleeve. Most important, they remained completely satisfactory for operation under actual service conditions.

Wood's Sure-Flex Couplings absorb from 5 to 15 times more shock and vibration than other leading flexible couplings, resulting in increased motor and machine life. They withstand all combinations of misalignment and end-float without wear or high resisting forces. There are only 4 basic parts which lock together without clamps or screws, tightening securely under torque to provide smooth, dependable power transmission. There is no downtime . . . no need for lubrication or maintenance.

For complete information and your copy of Bulletin 10100A, contact your T. B. Wood's distributor.

V-BELT DRIVES • VARIABLE SPEED DRIVES • TIMING BELT DRIVES • CARD DRIVES • FLEXIBLE AND RIGID COUPLINGS • FLYWHEELS • PULLEYS • MOTOR BASES • BALL BEARING PILLOW BLOCKS, FLANGE UNITS AND TAKE-UP BEARINGS • BABBITTED AND BRONZE BEARINGS • DUCTILE IRON PRODUCTS

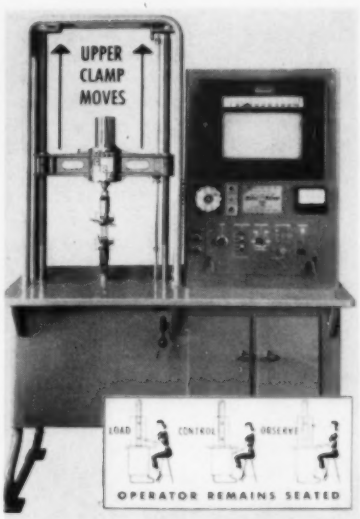
Wood's

T. B. WOOD'S SONS COMPANY
CHAMBERSBURG, PENNSYLVANIA

ATLANTA • CAMBRIDGE • CLEVELAND • DALLAS • NEWARK

For more data, circle A-95 on Reader Service Card

CONTINUED FROM PAGE 148



Elongation Tester

The CRE tensile-elongation tester, which makes possible a constant-rate-of-extension testing with high precision, has been announced by Scott Testers, Inc., 3 Blackstone St., Providence, R. I.

Constant extension is caused by an upward moving crosshead that pulls the top holding clamp away from the lower fixed clamp at precisely uniform speeds (from 0.5 to 20 ins. per min.) up to 70 ins. of crosshead travel.

An automatic electric weighing system measures the resultant force, and the registration of the stress-strain curve is permanently charted on a visual recorder. Ratio of chart travel to crosshead upward travel can be varied to magnify stress-strain curves as much as 400 to 1. A variety of optional features for maximum versatility are available.

Circle T-24 on Reader-Service Card

Worsted Finisher

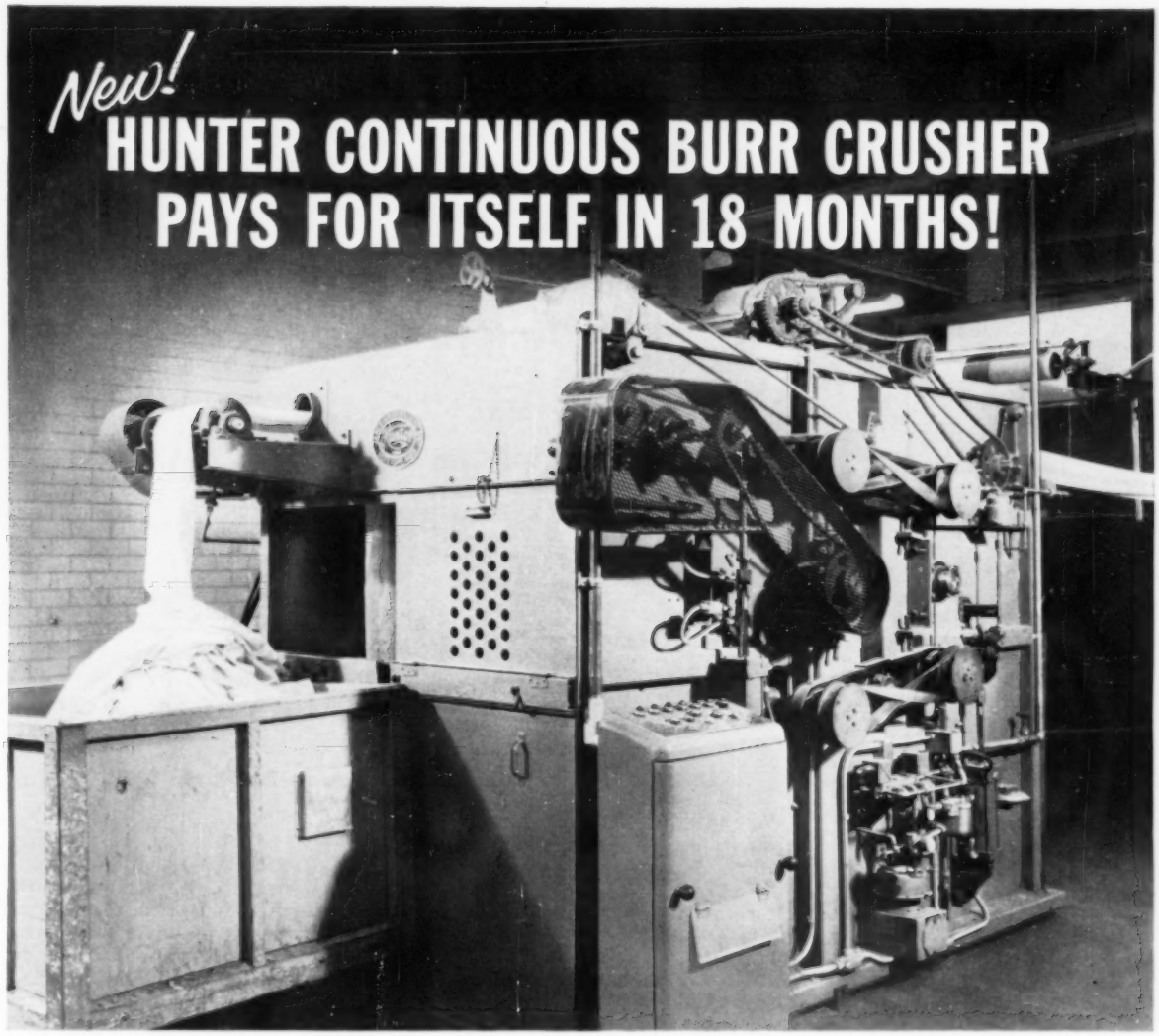
A finisher for worsted yarns introduced by Ets La Duranitre S.A., Herstal, Belgium, is made in units of four balls with the delivery in double or single roving. Safety devices such as sliver stop motions will stop only one unit when a failure occurs.

A fiber-control system uses a flanged circular comb. The sliver enters a groove with pins. Because fibers are concentrated in this groove, wider pin settings can be used and sliver is controlled better.

Rubbing leathers are replaced with

New!

HUNTER CONTINUOUS BURR CRUSHER PAYS FOR ITSELF IN 18 MONTHS!



The Hunter Continuous Burr Crusher embodies a completely new operating principle to speed Carbonizer production, and deliver results superior to those obtainable with a batch Burr Crusher. Yet, purchase, operating and maintenance costs represent only a fraction of those associated with conventional Burr Crushers.

NO TIMERS OR RELAYS. The motor runs in *one* direction only. Cloth reversal is entirely mechanical, controlled by pneumatic detectors which bring the cloth into contact with one of two sets of rolls, each running in opposite directions. Reversal is accomplished automatically, when all of the cloth has been removed from either of two scrays, located inside the machine; *costly, troublesome timing mechanisms are entirely eliminated.*

MINIMUM MAINTENANCE. Because of its completely positive, mechanically-activated operation, maintenance of this new Hunter Crush Mill is reduced to a minimum. The cumbersome additional controls usually required for stop-and-reverse drives are eliminated.

LOW OPERATING COST. The Hunter Continuous Burr Crusher's speed is synchronized with that of the Carbonizer, from which it receives cloth directly. Its operation is under the complete control of the Carbonizer operator... and no extra labor is required. The motor uses only a fraction of the horsepower needed to drive conventional dry mills. Savings you can effect through lower operating and maintenance costs can pay the full cost of this unit in 18 months.

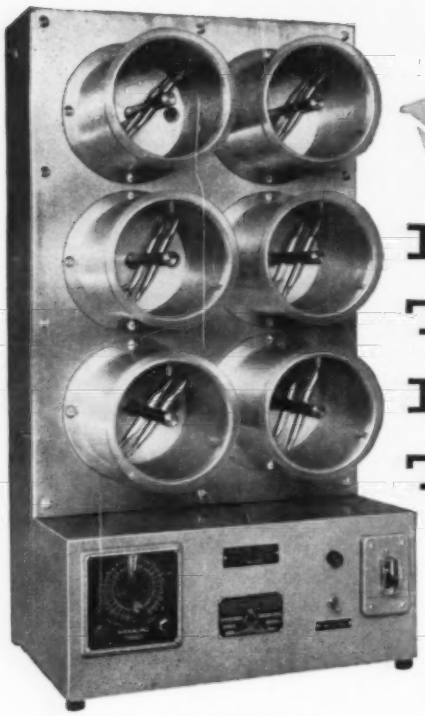
COMPACT, COMPLETELY ASSEMBLED. The entire unit occupies no more space than that required by one batch mill. It is shipped completely assembled and wired, and ready to start delivering new processing savings to you. Write for complete specifications in the new Hunter Bulletin BC.

JAMES HUNTER

JAMES HUNTER MACHINE COMPANY • NORTH ADAMS, MASSACHUSETTS

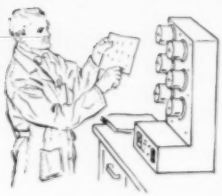
Subsidiaries: *James Hunter, Incorporated, Greenville, S. C. • Hunter Fiber Machine Co., Los Angeles, California*
Thomas Leyland Co., Readville, Massachusetts • Hunter Controls, North Adams, Massachusetts

For more data, circle A-96 on Reader Service Card



NEW

Random Tumble Pilling Tester ...by Atlas



Atlas Random Tumble Pilling Tester Model PT-6. Other models with four and two chambers available.

A New Laboratory Instrument for Evaluating the Pilling and Fuzzing Characteristics of All Types of Fabrics. Will test up to 18 samples per hour.

Results obtained correlate well with actual end use performance in respect to the number, type and size of pills as well as in surface distortion and general overall appearance.

Duration of tests is controlled by an electric timer which may be set to automatically stop the test at any preselected time from one minute to 30 minutes. In action, specimens are constantly flexed and abraded multidirectionally by being rubbed against the neoprene liner as well as against the other fabric specimens.

Specimens are cut 4 3/16 inches square at approximately a 45° bias to warp and filling direction for woven fabrics or to wales and course direction for knitted fabrics.

Each cylindrical chamber is 5.75 inches in diameter by 6 inches deep. Impellers are 4.75 inches long and rotate at 1200 R.P.M. Powered from 115 V. 50 or 60 Cycle A.C. ordinary plug outlet.

FADE-OMETER®
used all over the world as the standard testing machine for determining the action of sunlight on materials.

LAUNDER-OMETER®
Standard testing machine of the A.A. T.C.C. for color-fastness and bleeding, shrinking, resistance to washing, testing dyes, soaps and detergents.

ATLAS ELECTRIC DEVICES CO.
4114 N. Ravenswood Ave., Chicago 13, Ill., U.S.A.

Fade-Ometer® • Launder-Ometer® • Weather-Ometer® • Accelerotor® • Scorch Tester

;a false-twist tube that continuously rotates in the same direction at 1,500 to 3,000 rpm. Wool in rovings of 0.5 grams per meter can be processed and delivered into cans or balls, but nylon rovings up to 40s metric system can be obtained.

Circle T-25 on Reader-Service Card

Knitting Lubricant-Cleaner

A lubricant-cleaner for circular knitting machines, developed by Reading Testing Laboratories, Inc., 658 S. 7th St., Reading, Pa., is said to produce clean, streak-free fabric. The material's penetrating detergent action removes carbon deposits from machine cylinders; and at the same time, it thoroughly lubricates machine parts.

Old oil residues that mark and stain fabric are eliminated by the material, Conditioner-CK. It is colorless and can be applied freely to sinkers, needles, and related parts. It will not corrode machine parts; and since it is completely scourable, it permits even fabric dyeing.

Circle T-26 on Reader-Service Card

Shuttle-Bolt Lock

An adhesive material, Loctite, has been developed by Steel Heddle Mfg. Co., 2100 W. Allegheny Ave., Philadelphia 32, Pa., for locking shuttle bolts to shuttles. And the material can also be used to lock other metal screws, nuts, and bolts so that they do not shake loose from vibration.

When one drop of the liquid is applied to a bolt, it hardens to a tough plastic seal. The locking action prevails even if the fastener is loosened or tightened and is destroyed only by removing the bolt from the nut.

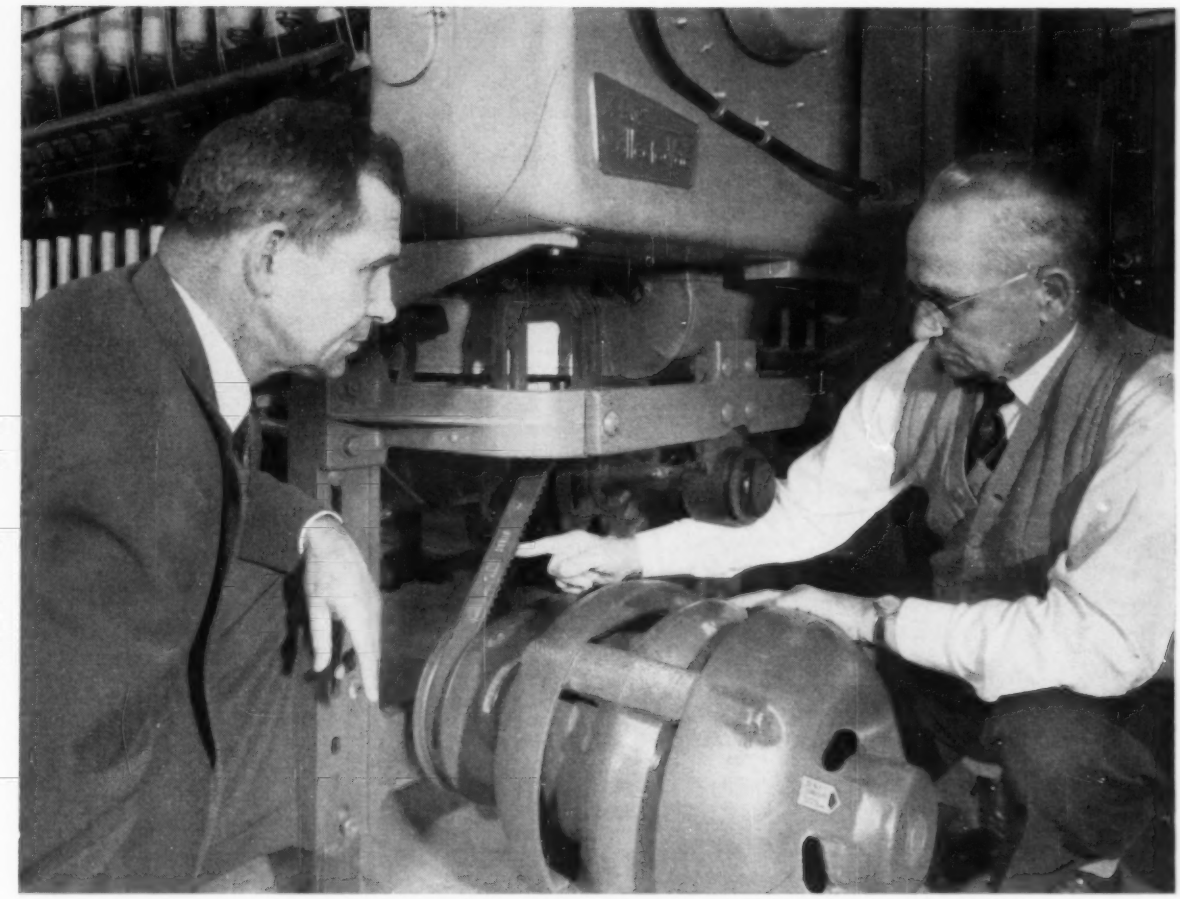
The material is used on all metals except zinc or cadmium, and a special activator is available for these surfaces. With this adhesive liquid, every nut becomes a lock nut.

Circle T-27 on Reader-Service Card

Single-Strand Tester

A motor-driven single-strand tester made by Alfred Suter Co., 200 5th Ave., New York, N. Y., is especially designed for low-range yarn strength and elongation testing that does not exceed maximum loads of 25 lbs.

There is an easy-to-read 9½-in.-radius quadrant with white nickel finish with black graduations and characters. The readings remain fixed after the specimen breaks. Two or three scale ranges are supplied in pounds or



© D.R. 1958

Mr. C. H. Stroupe of Howe Distributing Co. (left) is shown with spinning mill superintendent.

Dayton Variable Speed V-Belts Save $19.00 a Frame...Increase Output 7%

at Majestic Manufacturing Company, Belmont, N. C.

"By converting our 44 spinning frames to Dayton Variable Speed Drives, we increased production by 7% and have virtually eliminated downtime for speed changes," states the superintendent of a cotton spinning plant in Gaston County, North Carolina.

"We produce combed cotton yarns in counts ranging from 50's to 80's. On certain counts a 10% increase in front roll speed over our previous speeds has not affected the quality of our yarn and has made the job run equally as well. Previously, each time we changed pulleys the frame was down from 30 to 50 minutes.

"When we converted to Dayton Variable Speed Drives we eliminated our pulley-switching problem. Now we change speeds in a matter of seconds and production has jumped 7%!

"Each drive is equipped with a single Dayton Variable Speed V-Belt costing only about $14.50, in place of five standard belts.

"Operating 24 hours a day, 5 days a week, Dayton V-Belts give us from 3 to 5 years service. As a result we keep only 2 to 4 belts in inventory. In any event, our Dayton Distributor, Howe Distributing Company, Inc., of Gastonia, N. C., will deliver replacements in 30 minutes."

Dayton Rubber

World's Largest Manufacturer of V-Belts

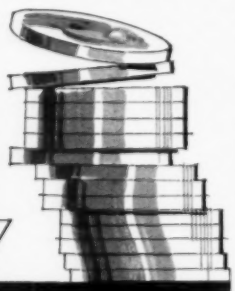
Consult the Yellow Pages of your telephone directory for the name of your nearest Dayton Distributor or write The Dayton Rubber Company, Industrial Division, Dayton 1, Ohio.

For more data, circle A-98 on Reader Service Card

DELTA Air Freight

costs less than you think!

Holds down inventories! Holds down costs of crating, insurance, capital tie-up. Protects against deterioration and market declines!



Delta AIR LINES

AIR FREIGHT
DOOR-TO-DOOR

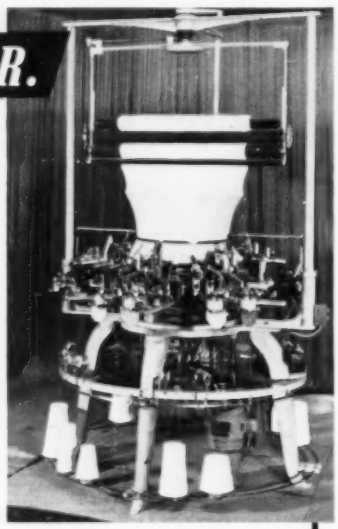
Call Delta Air Lines,
or write General Offices:
Atlanta Airport, Atlanta, Ga.

MOST COMPLETE ALL-CARGO SERVICE TO AND THRU THE SOUTH

For more data, circle A-99 on Reader Service Card

ALL NEW...

TOMPKINS S-1 JR.



MAKES THE MOST PERFECT CLOTH POSSIBLE

HERE'S A TYPICAL EXAMPLE...

Model S-1 Junior making fleece with 400-lbs. of Carter 26's and 8's —five feeds, 18" cylinder, running time 68-turns per minute . . .

- MINIMUM OF IMPERFECTIONS AND BROKEN NEEDLES

You can produce any class of cloth in the wide range of circular spring needle knitting—in greater quantity, with less waste and less needle breakage—on the New S-1 Junior! It gives you the proven Tompkins system in fully modern form . . . with triple stop motions, furnishing wheels, new gearless drive, automatic oiler and air cleaner! Get the full story now . . . be among the first to profit!

TOMPKINS BROS. CO.

623 ONEIDA ST. • SYRACUSE 4, N. Y.

Makers of Circular Spring and Latch Needle Knitting Machinery...Since 1846

the metric equivalent.

Yarn clamps are spaced 10 ins. apart. The maximum travel of the lower clamp is 11 ins. The pulling speed is 12 ins. per min., but variable speeds are available.

Circ'e T-28 on Reader-Service Card

Machine-Fault Detector

The smallest internal defect in a moving machine can be located without stopping the machine with a portable detector made by Burke & Co., Worton, Md. Jenkins Metal Shops, Inc., P. O. Box 1160, Gastonia, N. C., is the distributor in seven Southern states.

The detector will help you locate broken, loose, worn, or bent parts in motors, gear boxes, compressors, pumps, and similar equipment.

Circle T-29 on Reader-Service Card

Pressure Transmitter

An absolute-pressure transmitter that's accurate to 0.5% of full scale has been announced by The Foxboro Co., Foxboro, Mass. A force balance instrument, the cell transmitter, produces a 3- to 15-psi. linear signal proportional to absolute pressure. Since there is no direct drive of pen or pointer, full transmitter power is available to operate all standard receivers over long distances.

Measurement ranges are continuously adjustable between 0 to 50 and 0 to 250, or 0 to 200 and 0 to 850 ins. of water absolute. Transmitter parts exposed to process fluids

For more data, circle A-100 on Reader Service Card

Many strange fibers are "meeting on the frames" today, as new developments continually increase the number and variety of synthetics and blends.

Controlling these new fibers and filaments in spinning or twisting can be tricky business. And you seldom have much time to experiment. Let Victor *experience* take the place of costly trial-and-error.

Victor "keeps a step ahead" by working with the producers during development of new synthetics. That's why, when they reach you for production, Victor is prepared to help you overcome any new processing problems they present.

When you need help to get top-quality and trouble-free production—with synthetics, blends, or natural fibers—call in a Victor Service Engineer. Write, wire, or phone the nearest Victor office for prompt service.

VICTOR Ring Travelers

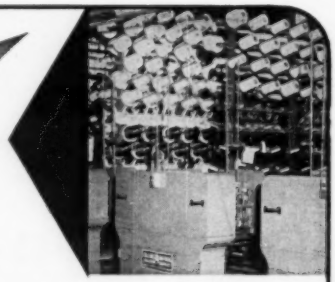
VICTOR RING TRAVELER DIVISION
OF SACO-LOWELL SHOPS

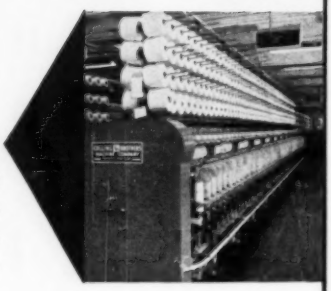
PROVIDENCE, R. I. . . 1 Sabin Street . . . . . Tel. DExter 1-0737

GREENVILLE, S. C. . . P. O. Box 7147, Branwood Sta. . . Tel. CEdar 9-3915

For more data, circle A-101 on Reader Service Card

There is a Collins Twister for every Ply Yarn Construction





Collins produces the most complete line of twisters on the market . . . Novelty, Ply, Big Ring, Beam, Cabling, Wet, Trap, Rayon, Paper, Glass, Single or Dual Drive, and Special Twister Take-ups.

Since 1866 Collins Twisters have been the finest in the field. Today's line offers you many valuable exclusive features. Let us give you full information on the machines you need.

COLLINS BROTHERS MACHINE COMPANY

647 Roosevelt Ave., Pawtucket, R. I. • Charlotte • Chicago
Hugh Williams & Co., 27 Wellington St. E., Toronto 1, Canada

For more data, circle A-102 on Reader Service Card

AT YOUR SERVICE

*

SPECIALIZED ENGINEERING
SPECIALIZED EXPERIENCE
SPECIALIZED MACHINERY
FOR
TWISTING • FORMING
STRANDING • BUNCHING
COTTON • JUTE • MANILA • SISAL
NYLON • DACRON • ORLON • SARAN
PAPER • POLYETHYLENE • GLASS

TEXTILE • WIRE • CORDAGE and OTHER INDUSTRIES

HASKELL-DAWES
MACHINE CO., INC.
2231 E. Ontario Street
Philadelphia 34, Pa.

For more data, circle A-103 on Reader Service Card

are Type 316 stainless steel. Overrange protection is provided to full 1,500 lbs. of working pressure. Maximum operating temperature is 250° F.

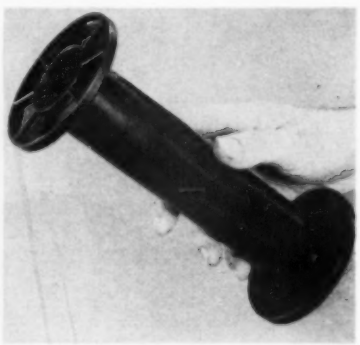
Circle T-30 on Reader-Service Card

Winder Cams

Nylon cams are now being used in place of steel cams on winders produced by Abbott Machine Co., Inc., Wilton, N. H. The change permits the winders to run 20 to 30% faster, and noise level has been greatly reduced.

Other advantages of the nylon cams are rapid acceleration, lighter weight, and lower maintenance costs. The cams are made from bar stock supplied by Polymer Corp., Reading, Pa.

Circle T-31 on Reader-Service Card



Plastic Bobbin

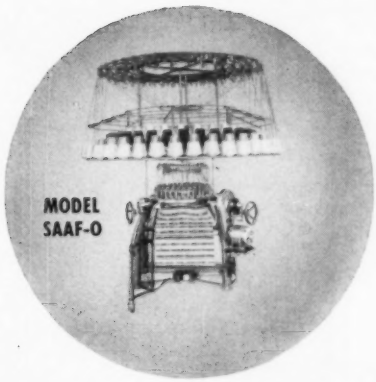
Textile bobbins are now being molded from extra-high-impact styrene by Worcester Moulded Plastics Co., Worcester, Mass., according to an announcement from Bakelite Co. Div., Union Carbide Corp., 655 Madison Ave., New York 21, N. Y.

The lightweight bobbins, which withstand rough handling, have dimensional stability and moisture resistance and are especially suitable for winding glass fibers.

Circle T-32 on Reader-Service Card

Speed Reducers

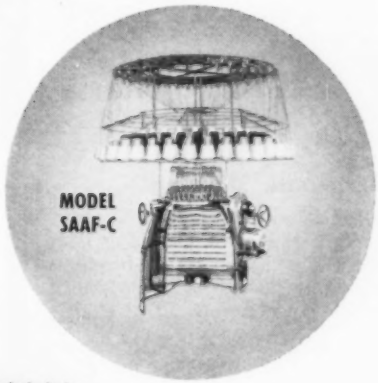
A line of shaft-mounted speed reducers designed for a variety of speed-reduction needs has been announced



These features make

SUPREME

the latest word in modernized, low-cost knitting
of automatic, variable striped, patterned or solid jersey
with or *without* knit-on simulated rib trim
and draw thread section separators



★

HIGH SPEED PRODUCTION

Large number of feeds, rugged construction and stationary yarnstand give you vari-striped and patterned fabrics at unprecedented rates. Standard 26" machine has 32 four color striping boxes — 32 three position pattern wheels—32 automatic pattern placers.

★

TREMENDOUS VERSATILITY

Striping boxes, pattern wheels and placers on every feed let you pour out an infinite variety of striking, multi-colored fabrics — with pattern inserts twice the size previously possible. Knit a wide variety of fabric construction and textures with virtually any type of natural or synthetic yarn.

★

HIGH QUALITY AT LOW COST

Knitting efficiency and quality are insured by these ingenious new features—128 cone, "step-design" (Pat. Pend.) yarnstand, new knitting elements system, new striping box with easy, manual setting, new pattern placer with slideable studs for fingertip control and new, scissor-type, synchronized "no-waste" cutters.

SUPREME
KNITTING MACHINE CO., INC.
96-02 100th STREET, OZONE PARK 16, N. Y.
Southern Representative and Showroom
The Mallack Co., 711 S. Tryon St., Charlotte, N. C.

Ask For This FREE Booklet On
SUPREME'S NEW "PAY-AS-YOU-DEPRECIATE" FINANCING PLANS
The PAYD Plan

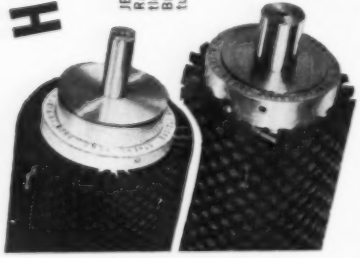
For more data, circle A-104 on Reader Service Card

Hop On The Jenkins' Metlkor Bandwagon

You'll have plenty of company for Textile Mill men everywhere are using Jenkins' METLKOR Brushes for every *textile brushing application*. They're built better to perform better and to *last longer*.

JENKINS' METLKOR NAP RAISING BRUSH. Bristled with Nylon, Hog Bristle, Fibre or Mixtures.

JENKINS' METLKOR FURNISHER BRUSH. The choice of leading Textile Printers. Dupont Tynex Nylon bristle.



Specify Jenkins' METLKOR
the original . . . the best *Metal Core* brush

METLKOR®
CYLINDER BRUSHES
and LIFEWOOD® WOOD BACKED BRUSHES

M. W. JENKINS' SONS, INC.
— Serving Industry for 80 Years —
331 Pompton Ave., Cedar Grove
Essex County, N. J. • CEnter 9-5150

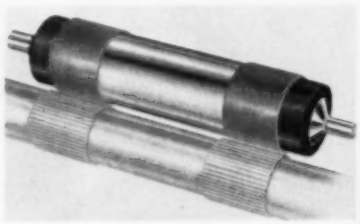
Circle A-105 on Reader Service Card

by Link-Belt Co., Prudential Plaza, Chicago 1, Ill.

The new units are available as: (1) single-reduction drives in six sizes with nominal ratios of 5 to 1 and capacities up to 50 hp. and (2) double-reduction drives in seven sizes with nominal ratios of 15 to 1 and capacities up to 40 hp.

The speed reducers can be mounted at angular as well as horizontal positions by using either tie-rod or foot mountings. Positive lubrication is constantly assured by a live-action oil spray generated automatically through gear rotation.

Circle T-33 on Reader-Service Card



Magnetic Top Rolls

Magnetic top rolls that produce pressure in drafting elements and eliminate the necessity for auxiliary pressure equipment have been announced by Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

The system, called Magnetrol, requires no lubrication in the drafting zone and is easy to clean.

Circle T-34 on Reader-Service Card

Live-Storage Rack

A live-storage rack for compact order picking from pallets is announced by M-H Standard Corp., 515 Communipaw Ave., Jersey City 4, N. J.

Circle T-35 on Reader-Service Card

Double-Deck Shelving

Double-deck shelving that increases storage area without increasing floor space where enough ceiling height is available is offered by Lyon Metal Products, Inc., Aurora, Ill.

Circle T-36 on Reader-Service Card

Corrosion-Resistant Insulator

Foamed silica is being offered by Pittsburgh Corning Corp., 1 Gateway Center, Pittsburgh 22, Pa., for appli-

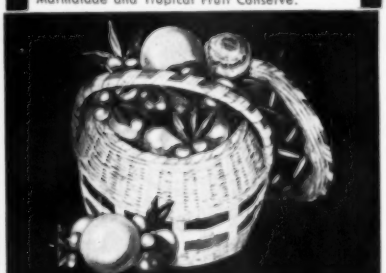
Say Merry Christmas
with the FINEST of FLORIDA FRUITS from Cobbs

"Your friends, business associates and loved ones will say, "How thoughtful!" For 24 years, World Famous COBBS gaily packaged Fruits and Delicacies have been excitingly received by millions! You can give no finer gifts" Henry Cobbs

Gift No. 14 $6.95
This colorful, hand-woven, Tia Juana Hamper, heaped high with luscious fruits...giant Grapefruit, Pineapple Oranges, Persian Limes, Chinese Kumquats, zipper-skin Tangerines, three Jars of Preserves — Pineapple Jam, Orange-Cherry Preserves, Guava Jelly . . . is purposely packed to thrill the eye and the palate. When emptied makes a lovely picnic accessory. Approx. 12 lbs.

Gift No. 1 $7.95
Same as Gift No. 2 except does not contain any delicacies...all fruit.

Gift No. 2 $9.95
Approx. 27 lbs.—A pretty Half Bushel Basket filled with fabulous Fruits 'n Jams, delightful to look at . . . delectable to taste! Oranges, Grapefruit, Limes, Kumquats, Tangerines and 3 large Jars of Guava Jelly, Pineapple-Cherry Marmalade and Tropical Fruit Conserve.



Gift No. 35 $9.95
Approx. 25 lbs.—A gaily colored, hand-woven, imported Half Bushel Basket brimming over with America's Finest Fruits . . . Pineapple Oranges, sugar-sweet Grapefruit, giant Persian Limes, Chinese Kumquats and zipper-skin Tangerines. Positively guaranteed to please ANYONE!

Gift No. 11 $14.95
Exactly the same as above Gift No. 35 except TWICE THE SIZE AND CONTENTS.

OBEY THAT Christmas URGE
Order Now!
Send check or money order; express prepaid. No foreign shipments except Canada—add 15% for Canada and West of the Rockies.
Cobbs
Box B-C
LITTLE RIVER
(MIAMI), FLORIDA
FREE GIFT CATALOG SENT ON REQUEST

Circle A-106 on Reader Service Card

A JOB WELL DONE

Here is how Coats & Clark feel about the Cleveland Tramrail installation, as expressed in a letter from Mr. L. P. Greer, Jr., Chief Engineer, to Mr. J. C. Wilkins of Cleveland Tramrail Atlanta Company:

"There comes a time on a job when one must sit down and take stock of those who deserve praise and recognition for their efforts in making the job successful. During the course of this job, it has been extremely satisfying to have dealt with you and Cleveland Tramrail on the overhead crane handling system. I wish to extend to you my sincerest thanks for a job well done."

One of five 2-ton, 37'-4" long completely motorized Cleveland Tramrail cranes at Coats & Clark, Inc., Toccoa, Georgia. Speeds: Crane travel 150 fpm, carrier travel 75 fpm, hoist 6 and 20 fpm. Safe electrification is obtained by use of Cleveland Tramrail SAFPOWRBAR conductors.

The advanced control equipment provided for crane travel motions and hoist enable easy accurate spotting of a load and smooth careful lowering into a kier.

CLEVELAND TRAMRAIL CRANES SERVE COATS & CLARK TOCCOA MILL

Bleaching, dyeing and drying operations are fast, easy one-man jobs at the new Thread Mercerizing Plant of Coats & Clark, Inc., Toccoa, Georgia. Fully motorized, push-button-operated Cleveland Tramrail cranes eliminate the need of any heavy manual lifting and enable handling large production units and thereby bring about increased efficiency.

GET THIS BOOK!

BOOKLET No. 2008. Packed with valuable information. Profusely illustrated. Write for free copy

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
8181 East 287 St., Wickliffe, Ohio

CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT

For more data, circle A-107 on Reader Service Card

NOW—CHECK ACCURACY WHILE YOU CHECK MOISTURE!

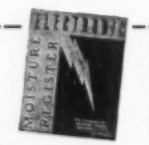
New Electronic Moisture Registers have first "built-in standard" in a 3-second, portable moisture tester.

NOW DIAL ACCURACY IS ASSURED, even under the extremes of production-line use. With *self-checking standard*, Moisture Register's new Model 5's are checked and adjusted for calibration accuracy right on the job—by any untrained operator. He simply fits electrode to standard. Then with new trimmer he sets dial for perfect alignment. Gives calibration adjustment *in the field*. You get practical accuracy down to 0% ... 3-second spot tests for moisture wherever your product may be. Portable, light weight, battery operated, new rugged construction with miniature tube. Factory-set to your needs.

For faster testing of—

- Wool, Cotton, Rayon, Nylon, Dacron, Orlon—practically any textile.
- Yarn: cones, beams, skeins.
- Fabrics: loose or compressed.

SEND FOR NEW TECHNICAL DATA and information on 2-week free trial.



ELECTRONIC MOISTURE REGISTER *Instruments*

Moisture Register Company, Dept. TW
P. O. Box 910, Alhambra, California
Please send data on new Model 5's.

We are testing _____

in moisture range from _____% to _____%

Firm _____

By _____ Title _____

Address _____

City _____ State _____

Circle A-108 on Reader Service Card

cations where high resistance to heat and corrosive fumes is important. The material is 99% fused silica and withstands thermal shock from −45 to 2,200° F. The product is available in blocks 11x17 ins. and 17x22 ins., in thicknesses up to 3 ins.

Circle T-37 on Reader-Service Card

Automatic Dispenser

An automatic liquid dispenser for harmful-to-pipe liquids, making up serial dilutions, and filling vials and ampoules has been developed by Fisher Scientific Co., 425 Fisher Bldg., Pittsburgh 19, Pa.

Circle T-38 on Reader-Service Card

Hand Truck

A hand truck with load capacities of 2,500 and 4,000 lbs., introduced by Automatic Transportation Co. Div., Yale & Towne Mfg. Co., 149 W. 87th St., Chicago 20, Ill., is designed for speedy handling of loads for short distances.

Circle T-39 on Reader-Service Card

Laboratory Liquid Agitator

Dyes, inks, pigment suspensions, or other materials can be agitated in two planes by a rotary agitator marketed by New Brunswick Scientific Co., Somerset St., New Brunswick, N. J. Twelve test tubes can be attached to the face of the agitator, which is operated from 110-v., 60-cycle, a.c. current.

Circle T-40 on Reader-Service Card

Thermistor Thermometer

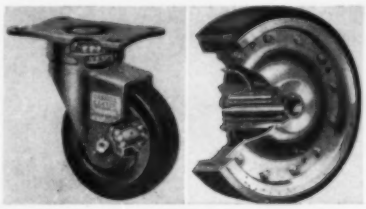
A multirange multichannel thermistor thermometer has been marketed by Yellow Springs Instrument Co., Yellow Springs, Ohio. The instrument covers the 0 to 50° C. range in five steps and is accurate to ±0.15° C. Probes are available for gas, liquid, surface, or clinical measurements.

Circle T-41 on Reader-Service Card

Plastic Acid Pump

Acids or other corrosive materials can be pumped from 5-pt. bottles with a pump made from polyethylene that has been marketed by Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa. A siphon, a spout, and a squeeze bottle are attached to the pump body.

LOOKING FOR WAYS TO SAVE MONEY?



DARNELL
CASTERS AND WHEELS

are designed
to cut maintenance
and replacement costs!

Darnell Casters and Wheels start cutting costs from the very first day of installation. Easy rolling and swivelling increase employee efficiency, save floors and help add to production. With over 4000 types of casters and wheels to select from you can specify the exact model to meet your requirements.

DARNELL
CASTERS AND WHEELS
Always SWIVEL
and ROLL

DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
86 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

Circle A-109 on Reader Service Card

Conduit box can be located top, bottom, or either side.
Control hand wheel can be positioned on top or either side.
All end-bracket assemblies are interchangeable for repositioning of drive components.
GET ALL THESE VARIATIONS FROM ONE BASIC DESIGN
—with wrench and screwdriver!
Output shaft can be high or low, right or left.
Motor can be mounted top or bottom.
Detachable feet can be bolted to bottom, side, or top for floor, wall, or ceiling mounting.
Just two of many variations that can be made from a standard ALLISPEDE DRIVE.

The ALLISPEDE* DRIVE gives you complete field versatility!

It's the most flexible and precise mechanical adjustable speed drive made . . . and the only one that can be fully adapted in the field!

The *all-new* ALLISPEDE DRIVE is the answer to any motor application that calls for low-cost adjustable speed. It permits smooth, easy speed adjustment — and maintains it exactly. Its modern design permits unusual field-flexibility — lets the user change the unit *any time* to suit his various requirements.

The a-c ALLISPEDE DRIVE is the *only* drive that can be fully adapted in the field by the user. The basic unit goes together like building-blocks . . . feet, end brackets, control hand wheel, conduit box, and output shaft can be relocated in minutes to fit existing space limitations. The same unit can be changed from an upright to a horizontal drive for floor, wall or ceiling mounting. And all you need is a wrench and screwdriver!

Superior design improves drive efficiency and extends service life. The four bearings equally distribute belt load, increasing bearing and belt life. Movable discs slide smoothly on internally-lubricated splined shafts — won't stick in place or wear. Belt changes are faster — never disturb the dial or adjustment mechanism. Rugged cast-iron housing with plated steel covers shields drive against dirt and corrosion . . . integral rotor fan cools the motor and force-ventilates the drive housing to extend bearing life. Oversize cartridge bearings are pressed on shaft and lubricated at the factory. Corrosion-resistant stainless steel nameplates diagram proper motor connection, specify bearing sizes, and carry complete instructions for operation and lubrication.

The ALLISPEDE DRIVE can be supplied with in-line or right-angle integral gears, brake and tachometer. Sizes from 1 to 20 HP with speed variations up to 8:1. Electrical and mechanical modifications are available to meet special requirements for any application.

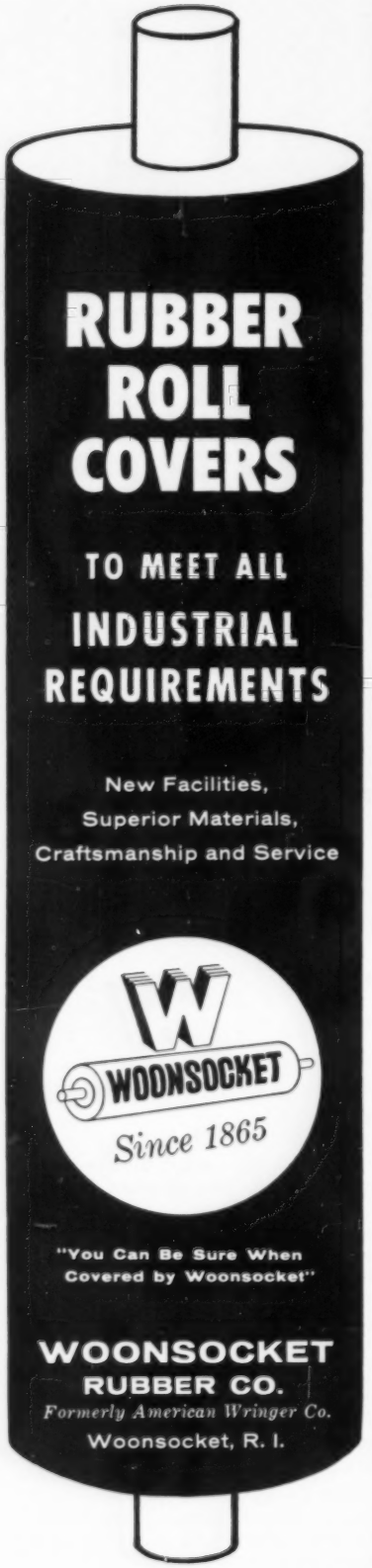
Contact your Louis Allis District Office or Distributor for complete information and engineering assistance. Or write for Bulletin 3300, The Louis Allis Co., 443 E. Stewart Street, Milwaukee 1, Wisconsin.

*ALLISPEDE is a trademark of The Louis Allis Co.

ASD-118

LOUIS ALLIS

MANUFACTURER OF ELECTRIC MOTORS AND ADJUSTABLE SPEED DRIVES



Circle A-111 on Reader Service Card

which is screwed onto the top of standard laboratory bottles.

Circle T-42 on Reader-Service Card

Dry-Fluid Drive

The Flexidyne line of dry-fluid drives and couplings has been expanded up to 1,000 hp., according to Dodge Mfg. Corp., Mishawaka, Ind. An 18-in. machine is now offered as a drive for use with V-belts or as a coupling for shaft-to-shaft connections. Smaller drives are available.

Circle T-43 on Reader-Service Card

Lint or Dust Collectors

Cyclone separator-type dust collectors built by Torit Mfg. Co., St. Paul, Minn., have been improved so that radial wheels move more air and operate more efficiently against higher resistance.

Circle T-44 on Reader-Service Card

Heavy-Fluid Pumps

Materials that do not flow readily, such as high-viscosity lubricants, can be pumped out of containers with a pump developed by Lincoln Engineering Co., 5742 Natural Bridge Ave., St. Louis 20, Mo.

Circle T-45 on Reader-Service Card

Caulking Compounds

A series of three synthetic polysulfide-rubber caulking compounds to be used on aluminum, concrete, brick, glass, cinder block, steel, and wood has been developed by Carboline Co., 32 Hanley, St. Louis 17, Mo.

Circle T-46 on Reader-Service Card

Manual Valve

A manual valve to provide unrestricted flow capacity, leak-free service, and easier maintenance is offered by Valvair Corp., 454 Morgan Ave., Akron 11, Ohio.

Circle T-47 on Reader-Service Card

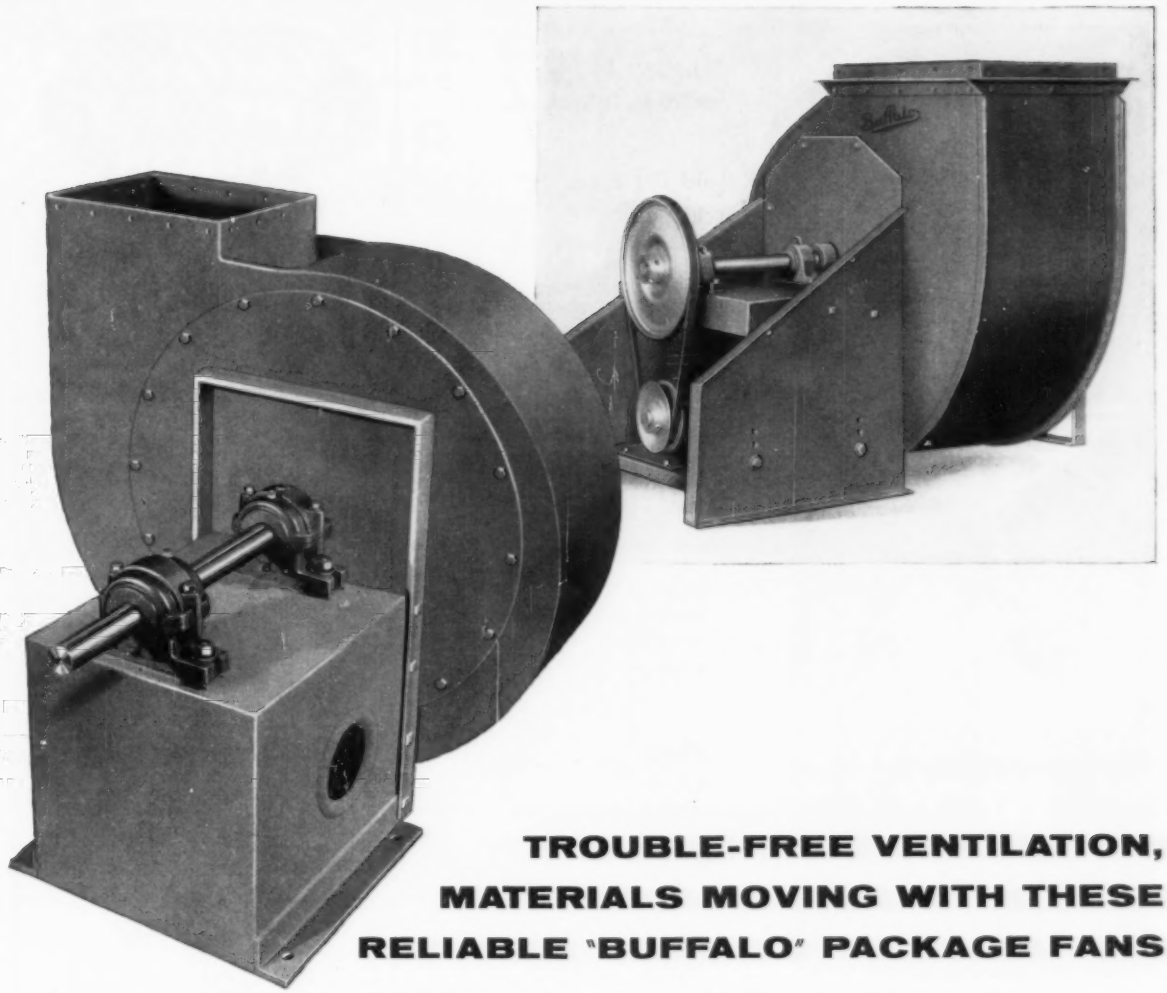
Self-Priming Syphon

An all-polyethylene syphon that primes itself has been developed by General Scientific Equipment Co., 7516 Limekiln Pike, Philadelphia 50, Pa. The syphon is useful in removing the contents of carboys or drums and

MORE
PRODUCTION!
HIGHER
QUALITY LAPS!
COTTON
or
SYNTHETICS
with the
LONG
PNEUMATIC LAP
CONTROL SYSTEM
FOR PICKERS
Exclusive Sales
Livingston & Haven
Incorporated
P. O. Box 808W, Charleston, S. C.
Direct Foreign Inquiries to:
PLATT BROS. (Sales), Ltd.,
Oldham England

Circle A-112 on Reader Service Card

Circle A-113 on Reader Service Card



TROUBLE-FREE VENTILATION, MATERIALS MOVING WITH THESE RELIABLE "BUFFALO" PACKAGE FANS

"BUFFALO" INDUSTRIAL EXHAUSTERS

"Buffalo" Industrial Exhausters are available in a wide variety of models, capacities and arrangements to handle your most demanding air or material handling jobs with the utmost efficiency and dependability. The heavy welded steel plate housing is adjustable to any desired direction of discharge. Ease of maintenance is assured by the removable front and back plates. The several arrangements in the line include both belted and direct-connected drives. The 8-bladed, all-welded air wheel effectively exhausts hot air, gases, fumes and light dust. Corrosion-resistant construction can be specified. Two types of material wheels cover all exhausting requirements, from emery dust, sawdust, paper, and chips to long shavings and other stringy substances. Capacities range from 600 to 37,000 cfm.

There's a rugged, reliable "Buffalo" Industrial Exhauster to fit most air or material handling requirements. Call in your "Buffalo" Representative, or write for full information in Bulletin 3576-B.

"BUFFALO" BELTED VENT SETS

Where low initial and operating costs are important . . . where a quiet fan is necessary . . . where a "package" unit is desirable . . . more and more industrial users are turning to "Buffalo" Belted Vent Sets. These versatile units are especially adaptable to smaller system requirements, or for use when central system ventilation requires augmentation. They offer quiet, stable performance, high efficiencies and the non-overloading characteristics of the largest "Buffalo" Fans. A lightweight package, they can be quickly and easily installed indoors, outdoors or as power roof ventilators. Available in capacities from 500 to 20,000 cfm (capacity can be modified at any time by changing motor or fan pulleys).

"Buffalo" Belted Vent Sets may be the economical answer to *your* smaller system ventilation needs. Contact your nearest "Buffalo" Engineering Representative, or write for Bulletin 3720-A.

Every "Buffalo" product features the famous "Q" Factor — the built-in QUALITY that provides trouble-free satisfaction and long life.

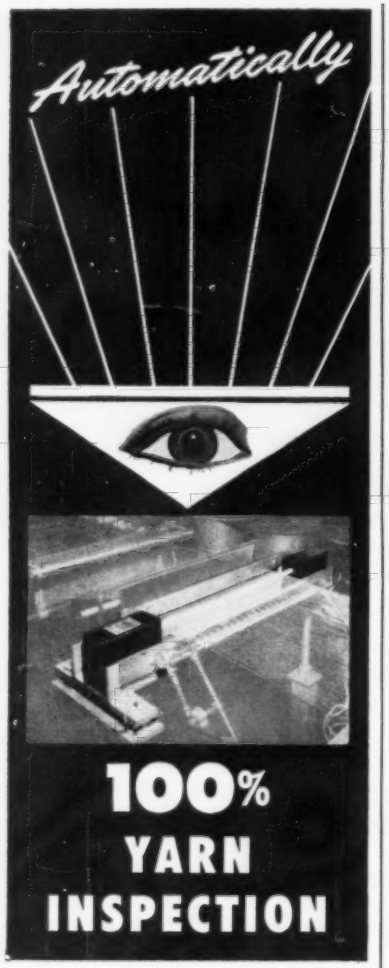
BUFFALO FORGE COMPANY

BUFFALO, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

VENTILATING AIR CLEANING AIR TEMPERING INDUCED DRAFT EXHAUSTING
FORCED DRAFT COOLING HEATING PRESSURE BLOWING

For more data, circle A-114 on Reader Service Card



...with the Lindly
Automatic Yarn Inspector

Take all the guesswork out of yarn inspection with the new standard of yarn quality—THE LINDLY COUNT.

The Lindly Automatic Yarn Inspector counts every fault... provides a stop motion, set to your tolerances. You determine quality, measure it in terms of THE LINDLY COUNT.

Lindly Automatics pay for themselves in a short time, go on adding to your profits for years.

Inquire about the family of Lindly Automatics, built to cut your costs, boost your quality.

It Pays to Know LINDLY the Lindly Count

LINDLY & COMPANY, INC.
248 HERRICKS ROAD
MINEOLA, NEW YORK

Circle A-115 on Reader Service Card

is resistant to acids, alkalis, oxidizing agents, and polar liquids at normal temperatures.

Circle T-48 on Reader-Service Card

Pneumatic Packer

A pneumatic packer announced by Container Stapling Corp., 308 N. Park Ave., Herrin, Ill., closes filled cartons from the outside with staple clips and sets up empty containers for packing; it seals any ordinary box in a few seconds' time.

Circle T-49 on Reader-Service Card

Area-Type Flow Meter

Flow meters with capacities of from 0.0001 to 30 gals. per min. are available from C-Mar Corp., 35 Euclid Ave., Manasquan, N. J. The Series 5,000 Taper-Flo meters can be supplied to meet various industrial requirements.

Circle T-50 on Reader-Service Card

Lightweight Hoist

A lightweight aluminum trolley hoist with capacities up to two tons that features one-man installation and permanent sealed-in lubrication has been announced by Philadelphia Hoist Div., Industrial Enterprises, Inc., 338 N. Hamilton St., Doylestown, Pa.

Circle T-51 on Reader-Service Card

Pump Motor Adapter

A hydraulic pump motor adapter that fits on the end shield of motors and permits the installation of almost any flange-mounted hydraulic pump directly on the motor is offered by General Electric Co., Schenectady 5, N. Y.

Circle T-52 on Reader-Service Card

Air-Distributing Units

Air-distributing units designed to serve either cooled or heated air or controlled mixtures of the two to each zone for use in commercial buildings is announced by Westinghouse Electric Corp., Sturtevant Div., Dept. T-222, 200 Readville St., Hyde Park, Boston 36, Mass.

Circle T-53 on Reader-Service Card

Out Goes
LINT · FLY
TRASH
from your
SPINNING FRAMES
and ROVING FRAMES
Quickly • Economically

by using
M·B AMOSKEAG PNEUMATIC ROLL PICKER

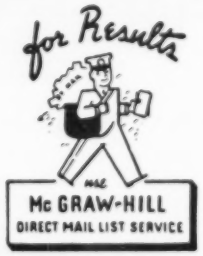
MODEL A-VT-A

A pneumatic tool especially designed for the specific purpose of REMOVING LINT and FLY from the top rolls of Spinning Frames and Roving Frames. Saves time and does a better job by substituting mechanical cleaning instead of laborious hand methods. Air deflector prevents fly and lint being blown into yarn when spinning. Adjustable valve permits any desired spindle speed.

Write for Literature

M·B PRODUCTS
46 VICTOR AVE., Div. 16
DETROIT 3, MICHIGAN

Circle A-116 on Reader Service Card



McGraw-Hill Mailing Lists
Will Help You

- Merchandise your advertising
- Conduct surveys
- Get inquiries and leads for your salesmen
- Pin-point geographical or functional groups
- Sell direct
- Build up weak territories
- Aid dealer relations

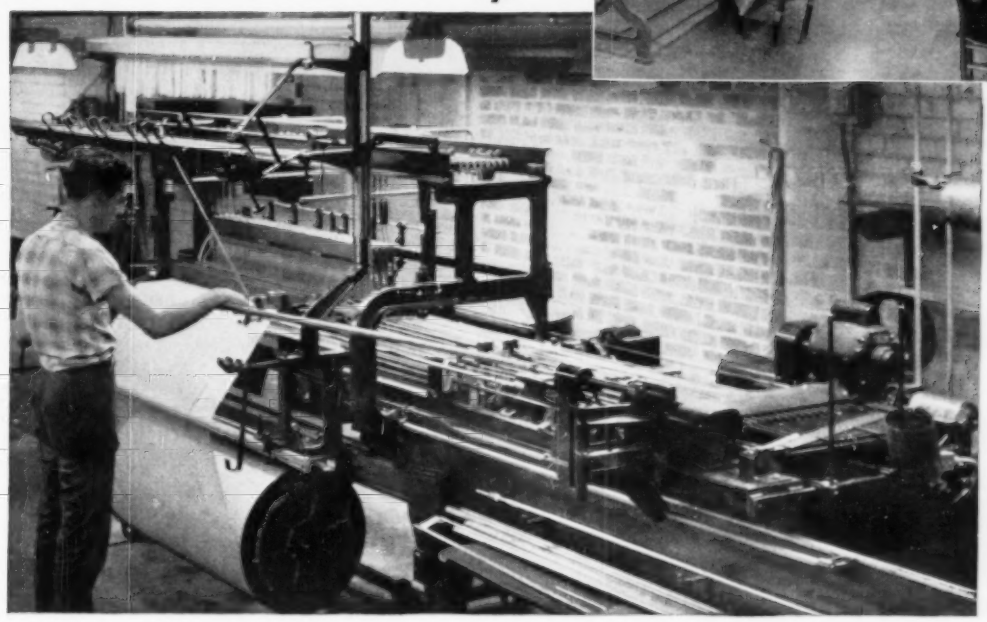
Direct Mail is a necessary supplement to a well rounded Business Paper advertising program.

Most progressive companies allocate a portion of their ad budgets to this second medium at the same time as they concentrate on the best business publications.

600,000 of the top buying influences in the fields covered by the McGraw-Hill publications make up our 150 mailing lists. Pick YOUR prospects out of our Industrial Direct Mail catalogue.

Write for your free copy.
It contains complete information.

IF YOU ARE
ENTERING
YOUR **WARPS**
LIKE THIS



WE SUGGEST YOU LOOK INTO THE

BARBER-COLMAN
WARP DRAWING MACHINE

With this machine, the time-eating task of drawing-in is speeded up tremendously. A power-driven needle, running at 127 to 230 strokes per minute (depending on the number of weaving elements to be entered), draws each thread in succession through the correct selection of drop wire, heddle, and reed dent. This correct selection is made accurately *and automatically* for each pick by a sequence of mechanical actions controlled by a pattern strip punched in accordance with the designer's draft. Very substantial reductions of drawing-in costs are possible, particularly on patterned goods such as stripes, plaids, and fancy weaves. This *modern method* of replacing warps has enabled many mills, both large and small, to meet the ever-increasing demands for a greater variety of patterns. *Your Barber-Colman representative is qualified to advise you on possibilities in your mill.*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

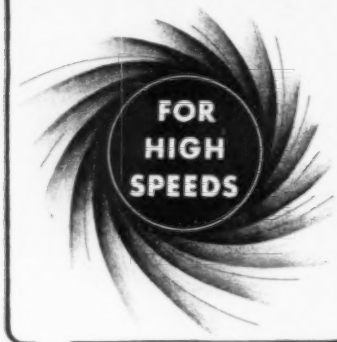
ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. | GREENVILLE, S. C., U.S.A. | MANCHESTER, ENGLAND | MUNICH, GERMANY

INDIA	MEXICO	BRAZIL	JAPAN	PAKISTAN	PAKISTAN
Batliboi & Company Forbes Street, Fort Bombay, India	J. Rabasa Isabel la Catolica 45-913 Apartado 7348 Mexico D.F., Mexico	Industria e Comercio de Maquinas S. A. Avenida Rio Branco No. 50, Rooms 1201/3 P. O. Box No. 63 Rio de Janeiro, Brazil	Do-Yei Shoji Kabushiki Kaisha Atlas Building (7th Floor) 11, Bingo-machi, 3-chome, Higashi-ku, Osaka, Japan	Associated Agencies (M'cr.) Ltd. Piccadilly House 11 Piccadilly Manchester 1, England	Associated Agencies (M'cr.) Ltd. 27 Kothari Building Napier Road Karachi 2, Pakistan

For more data, circle A-117 on Reader Service Card

LUBRIPLATE IS THE IDEAL LUBRICANT



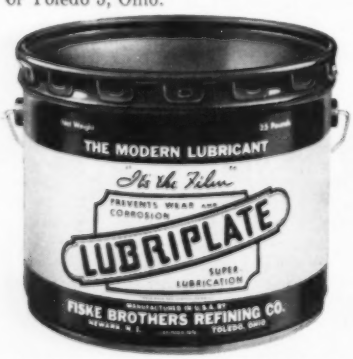
—say leading
Textile Manufacturers

LUBRIPLATE Lubricants have won acceptance in the textile industry because even with speeds up to 25,000 R.P.M., they have exceedingly long life and do not break down. LUBRIPLATE Lubricants range from the lightest oils to the heaviest greases to meet every requirement of the textile industry.

REGARDLESS OF THE SIZE AND TYPE OF YOUR MACHINERY, LUBRIPLATE GREASE AND FLUID TYPE LUBRICANTS WILL IMPROVE ITS OPERATION AND REDUCE MAINTENANCE COSTS.

LUBRIPLATE is available in grease and fluid densities for every purpose . . . LUBRIPLATE H. D. S. MOTOR OIL meets today's exacting requirements for gasoline and diesel engines.

For nearest LUBRIPLATE distributor see Classified Telephone Directory. Send for free "LUBRIPLATE DATA BOOK" . . . a valuable treatise on lubrication. Write LUBRIPLATE DIVISION, Fiske Brothers Refining Co., Newark 5, N. J. or Toledo 5, Ohio.



Circle A-118 on Reader Service Card

Wise Care of Windings Stops Motor Failures

Most motor failures are attributed to failure of windings. Yet the chief cause of these coil failures is the direct result of (1) mechanical trouble or (2) poor maintenance.

The most frequent cause of coil failures from mechanical trouble is overloading. Other contributing causes are: shafts out of alignment, worn bearings, excessive vibration, and sloppy repairs.

The three main enemies of coils are: (1) dirt, (2) moisture, and (3) heat. All three of these factors are easily curbed by regular inspection and simple maintenance.

Dirt—Enemy No. 1

Dirt is any foreign solid material that comes in contact with the insulation of the coil. It can be lint, dust, grease, metallic particles, or other materials.

Dirt blocks ventilation passages to cause: overheating, short circuits by acting as a conductor, and deterioration and ageing of insulation. Dirt also leads to mechanical damage of the coil when it is carelessly removed.

All motors, including totally enclosed motors, are attacked by dirt. Fortunately, periodic cleaning checks this coil enemy. Dirt can be removed from windings by four methods:

1. Wiping with a clean dry cloth
2. Blowing it out with compressed air
3. Drawing it off by suction
4. Removing it with solvents

Moisture—Enemy No. 2

One of the most subtle motor enemies is moisture. A normal continuously operated motor generates enough heat to keep coil insulation free from moisture. A continuously operated motor is attacked by moisture from abnormal sources such as dripping pipes, accidental wetting with a hose, and exceptionally humid conditions.

For excessively humid conditions, special coil insulation or treatment is necessary.

For motors not operated every day, moisture is a continuous threat. Insulation resistance of the coil insulation is lowered, and shorts and grounds result. Normal atmospheric conditions during certain times of the year, the summer rainy season, for example, cause enough day-by-day deterioration of a motor started infrequently for the motor to fail instantly when starting is finally attempted.

These failures are particularly true of stand-by motors. Where there is high humidity, motors used infrequently should be checked often with a megger to be certain the insulation value remains near normal levels.

If deterioration is progressive, the motor should be run to dry it out internally or external heat should be applied carefully before it is put in service.

Heat—Enemy No. 3

The coil insulation of a motor is generally the limiting factor of the operating temperature of the motor. The allowable temperature of insulation for three types of motors is shown in the table below.

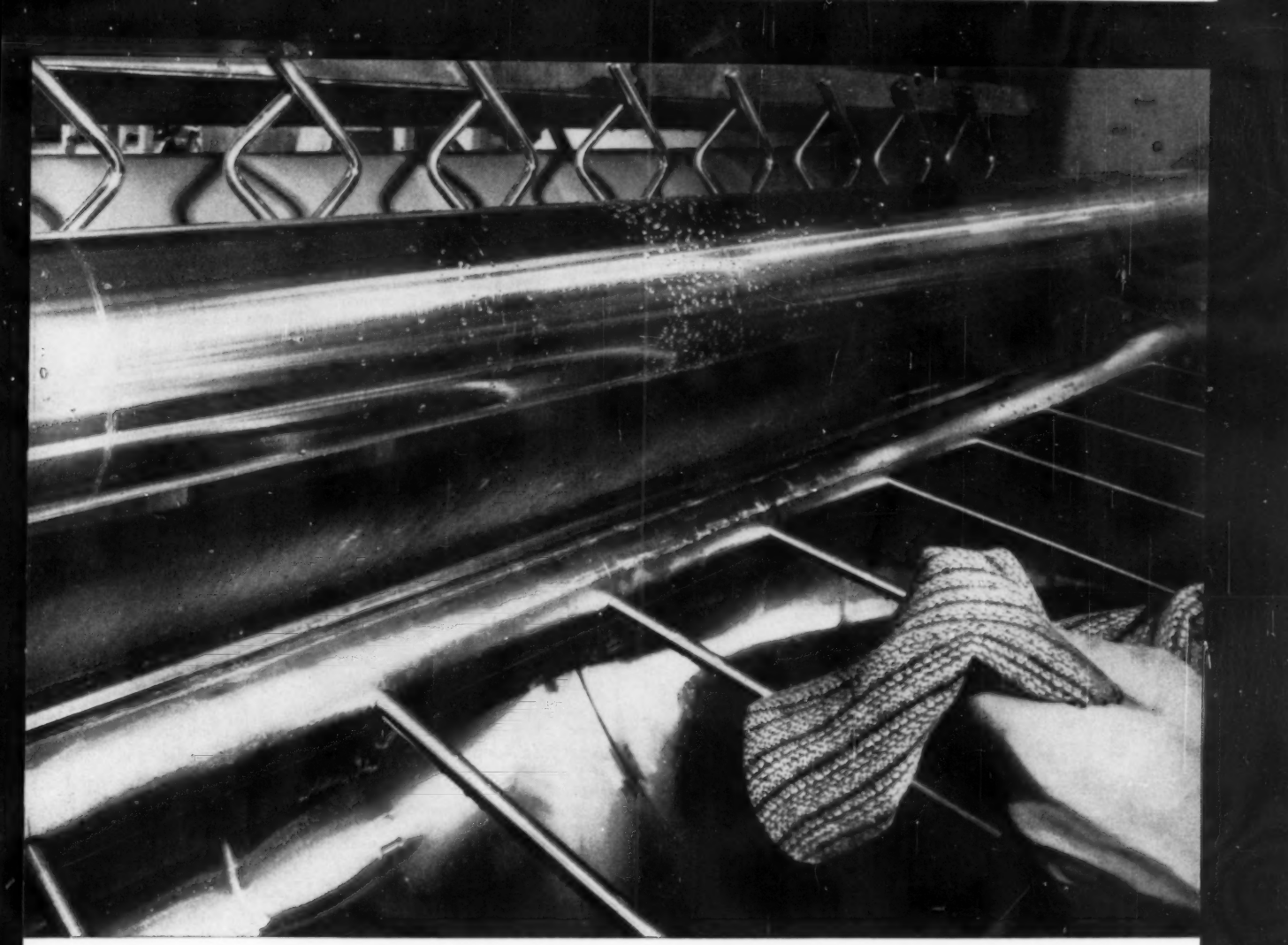
An old rule of thumb for the life of motor-coil insulation is, "For every 10° C. increase over the operating temperature, the life of the insulation is cut in half."

Heat causes insulation to age rapidly and become brittle; and this condition leads to cracking and peeling away from the coil, which results in failure.

Heat comes from several sources: poor ventilation, overload, increased resistance, and above-normal ambient temperature. Although heat is highly damaging, it is also easy to detect. In extreme instances, overheated insulation emits a characteristic odor. In normal instances of overheating, a maintenance man can tell overheating by touching or by checking with a thermometer.

Beside dirt, moisture, and heat, the life of motor windings is shortened by other electrical and mechanical causes. Although numerous, these miscellaneous defects account for so few failures they can generally be disregarded in normal preventive maintenance. *Howard W. Lang, Westinghouse Electric Corp.*

Enclosure	Class A	Class B	Class H
Open	90° C.	110° C.	150° C.
TEFC	95° C.	115° C.	155° C.
TENV	95° C.	115° C.	160° C.



Maintenance costs cut 20% with Stainless Steel washers

at Botany Finishing Company,

Passaic, New Jersey

You're looking at the inside of a dolly washer. It removes lint, dirt, excess dye, oils, acids, and alkalies from fabric—and it stays clean itself because it's made from Stainless Steel. Stainless resists corrosion, so the surfaces of the washer stay smooth and clean. All the dirt goes from the fabric to the drain. It can't cling to Stainless Steel.

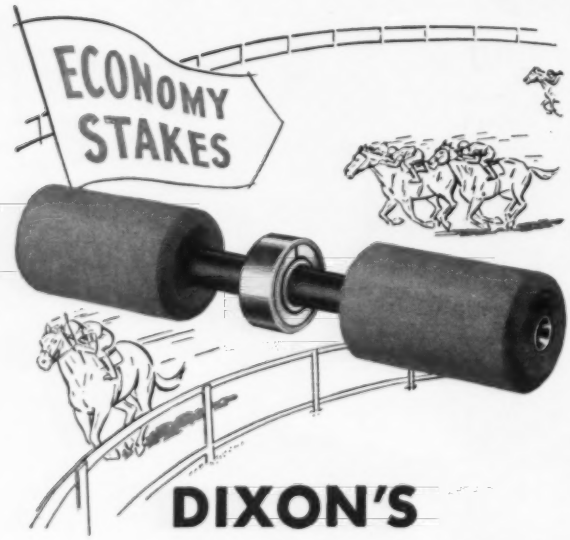
General Manager Richard G. Stoehr says that the three new Stainless Steel washers at the Botany plant have saved 20% in maintenance costs because they have eliminated so much cleaning time. The old washers took a lot of time to clean because they absorbed dyes and oils that were hard to wash away, and had to be scoured often to remove impurities. Even with extra maintenance, the old washers were unusable within five to eight years. The Stainless Steel washers will last indefinitely.

If you want to reduce maintenance at your plant, build your equipment with USS Stainless Steel. It resists corrosion and it lasts years longer. *USS is a registered trademark*

United States Steel Corporation—Pittsburgh
American Steel & Wire—Cleveland
National Tube—Pittsburgh
Columbia-Geneva Steel—San Francisco
Tennessee Coal & Iron—Fairfield, Alabama
United States Steel Supply—Steel Service Centers
United States Steel Export Company

USS United States Steel

A Sure Winner!



DIXON'S "Inner Race" Front Roll

Jockeys know the inside rail means greater gain from less distance. For similar reasons, you're sure to win with Dixon's anti-friction front top roll. Only the small diameter inner race turns, requiring far less travel and wear — and *only* Dixon offers this cost-saving advantage. Note these exclusive, unequalled Dixon front roll features:

1. Precision ground balls and raceways.
2. Maximum radial load of 232 lbs. at 300 rpm.
3. Lifetime lubrication held in by lint-proof contact seals.
4. Less wear, longer life because only inner race turns.
5. Unique swivel mounting assures front roll and front saddle self-align automatically.
6. Zero thrust load, due to self-alignment features.
7. Concentricity within .001".
8. Assembled from only 2 major pieces.
9. Simple buffing without attachments.
10. Allows side piecing up.

Leading Textile Mills Cut Drafting Costs

Dixon Super Saddle Guides changeovers equipped with the exclusive Dixon rolls eliminate all top roll cap bars and all oiling, can be installed in two steps to spread out investment: Front roll and saddle combination first; later adding middle rolls, back rolls and saddles — no parts wasted, no costly elements to throw away. Dixon Saddle Guide assemblies for more than 1,000,000 spindles (Duo-Roth or Casablanca type spinning) have been supplied to textile leaders like Cone Mills, Columbus Mfg. Co., American & Efird Mills, Inc., Gastonia Combed Yarn Co. and Montreal Cottons, Ltd.

Write for complete data on Dixon Super Saddle Guide

723-7

DIXON CORPORATION
BRISTOL RHODE ISLAND

Southern Sales: R. E. L. Holt, Jr., and Associates, Inc.
Box 1319, Greensboro, N. C. and Lawyer's Office Building, P. O. Box 321, Greenville, S. C.

Manufacturers of Drafting Devices since 1876

NEWS ABOUT SUPPLIERS

ACME STEEL CO., Chicago, Ill.—Has appointed G. F. Griffith executive vice president, commercial, and J. H. Myers vice president, marketing. . . . **AIR REDUCTION CHEMICAL CO.**, New York, N. Y.—Has named G. E. Cole manager of general sales and C. O. Herman manager of technical sales. . . . **ALCO OIL & CHEMICAL CORP.**, Philadelphia, Pa.—Has announced that Southern Latex Corp., Madison, N. J., will sell, distribute, and provide technical service on the company's thickeners and chemicals in the Southeastern states. . . . **ALLIED CHEMICAL CORP., SOLVAY PROCESS DIV.**, New York, N. Y.—Has appointed A. Phillips, Jr., vice president. V. W. Aubel, Jr., has been named director of sales, R. L. Reynolds assistant director of sales, and G. R. Barclay manager of the sales department's organic chemical section.

JAMES C. DONALD (left) has joined the organic-chemicals sales force of Dewey & Almy Chemical Div., W. R. Grace & Co., Cambridge, Mass. JOSEPH R. WHITEHURST (center) has been named general sales manager of Ideal Industries, Inc., and Ideal Machine Shops, Inc., Bessemer City, N. C. GEORGE I. ROUNDS (right) has been named vice president in charge of marketing of Industrial Rayon Corp., Cleveland Ohio.

AMERICAN AIR FILTER CO., INC., Louisville, Ky.—Has named G. M. DeBaker to the Milwaukee, Wis., sales office. D. Ryan, T. Mulvey, and L. Harlan have been named sales engineers, Chicago, Ill.; and E. A. Cruse has been named sales engineer, Detroit, Mich. . . . **AMERICAN CYANAMID CO.**, New York, N. Y.—Has named J. D. Lowery assistant general sales manager of the Industrial-Chemicals Div. E. G. Walker has been named sales manager of the Fibers Div. . . . **AMERICAN VISCOSE CORP.**, Philadelphia, Pa.—Has elected P. E. Hill and H. J. Michel vice presidents. J. A. Kittrell has been named manager of the Meadville, Pa. acetate plant. . . . **ARNOLD, HOFFMAN & CO., INC.**, Providence, R. I.—Is expanding its laboratories at Charlotte, N. C., and Providence, R. I.

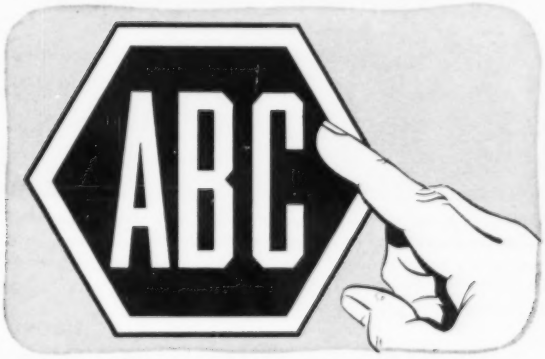
LOUIS P. BATSON CO., Greenville, S. C.—Has been appointed sole agent in the U.S. for William Tatham Ltd., Belfield Works, Rochdale, England. J. C. Aycock has been named sales representative in the South Carolina-North Carolina-Georgia-Tennessee area. . . . **BELLE CHEMICAL CO.**, Reading, Pa.—Will build a chemical plant at Chester, S. C., in 1959. . . . **BORG-WARNER CORP., MARBON CHEMICAL DIV.**, Chicago, Ill.—Has named D. M. Pratt sales manager for resins and adhesives and W. A. Suiter sales manager for Cycolac plastic. . . . **A. B. CARTER, INC.**, Gastonia, N. C.—Has named W. T. Horton sales engineer, succeeding the retiring W. L. Rankin. . . . **CELANESE CORP. OF AMERICA**, New York, N. Y.—Will start a multimillion-dollar expansion program at its acetic-acid plant at Pampa, Tex. The company also announced that Miss R. B. Graham has joined the company as market liaison representative for home furnishings.

CIBA CO., INC., New York, N. Y.—Has named E. H. Hart to the chemical-specialties department. . . . **COBBLE BROS. MACHINERY CO., INC.**, Chattanooga, Tenn.—Has bought the assets of Super Tufter Machinery Co., Inc., Fort Oglethorpe, Ga. . . . **CONNELL MACHINERY CO.**, Spartanburg, S. C.—Is a new firm dealing in textile machinery and supplies. . . . **CORN PRODUCTS REFINING CO.**, New York, N. Y.—Has merged with Best Foods, Inc., to form a new company, Corn Products Co.

Who's Minding The Store?

. . . in the magazine publishing business, it's

The Audit Bureau of Circulations (ABC) is a cooperative organization that sets standards of good business conduct for its publisher members. Once each year ABC auditors carefully scrutinize the entire circulation structure and operation of every member magazine. In a very real sense, therefore, they are "minding the store" — making sure that no false or misleading claims are made regarding the size or composition of a magazine's audience.



McGraw-Hill is a charter member of ABC and has supported its aims continuously for over 40 years. We believe this membership serves you by providing full assurance that every subscriber to McGraw-Hill magazines displaying the ABC symbol is paying to receive his copies.

Accurate Figures — about you are the heart of ABC's job. ABC does a candid, unbiased, certified audit of all subscription figures of member magazines — and of the subscribers' jobs, functions, and locations. These audits help editors to tailor the contents of their magagine to your specific job interests.

You're the boss when you pay money for any magazine. Your vote of confidence and your renewals of subscriptions are dominant in the thinking of editors and publishers. Advertisers are vitally interested, too, and their support helps earn the dollars needed to do a stronger, more useful editorial job for you.

You, the subscriber, win when you buy business magazines that hold membership in the Audit Bureau of Circulations. The ABC symbol signifies that the publication to which you subscribe makes every effort to provide you with the type of informatin you need to do a better, more effective job. It also indicates that the publisher maintains the highest standards of business ethics.

McGRAW-HILL PUBLICATIONS

McGRAW-HILL PUBLISHING COMPANY, INC.

330 WEST 42ND STREET, NEW YORK 36, N. Y.

Here's FREE help on textile mill cleaning

Just about every important cleaning problem a textile mill runs up against is discussed in the Oakite booklet, "Textile Mill Cleaning Guide."

Like the sections on job-tested cleaning procedures for overhaul work ... on cleaning of machinery ... plant maintenance cleaning. There's also a section on cleaning of air-conditioning and humidifying equipment.

Chances are you'll find the answer to your special cleaning problems ready-to-hand in this helpful informative booklet. Write for your free copy to Oakite Products, Inc., 52D Rector Street, New York 6, N. Y.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
MATERIALS · METHODS · SERVICE
SCIENCE

Export Division Cable Address: Oakite
Technical Service Representatives in Principal Cities of U. S. and Canada

For more data, circle A-122 on Reader Service Card

MODEL 31 AD Piece-end Sewing with SAFE Retractable Pins

20" dia. cloth wheel with 6 pairs of pins retracted by cam for automatic cloth stripping. Retracted pins are safe. Heavy duty gear type sewing head. Single chain stitch. Wide range of stitch adjustments. Motor drive.

DINSMORE MANUFACTURING CO.

Box 267 Salem, Mass.

NEWS ABOUT SUPPLIERS Continued

CREST CHEMICAL CORP., Newark, N. J.—Has merged with Synthron, Inc., Ashton, R. I. . . . **DOW CHEMICAL CO.**, Midland, Mich.—Has begun production of iminodiacetic acid at its Midland, Mich., division. The company has named C. J. Williams sales manager of the Plastics Dept. . . . **CUTLER-HAMMER, INC.**, Milwaukee, Wis.—Has promoted E. S. Mathieson to the post of works manager. G. W. Bolln has been named manager of operations planning, and C. J. Steinke has been named manager of operations production. . . . **E. I. DU PONT DE NEMOURS & CO., INC.**, Wilmington, Del.—Has announced that the merchandising division of the Textile Fibers Dept. has formed two special groups responsible for keeping retailers informed on new developments in apparel containing the company's fibers and on its merchandising plans.

THIS NEW PLANT for the polymerization of a wide range of polyvinyl-acetate emulsions is now on stream at Slough, Bucks, England. It is operated by National Adhesives Ltd., the British subsidiary of National Starch Products, Inc., New York, N. Y.

EASTMAN CHEMICAL PRODUCTS, INC., Kingsport, Tenn.—Has named D. O. Green staff assistant to B. F. Roberts, apparel merchandising manager. . . . **EMERY INDUSTRIES, INC.**, Cincinnati, Ohio—Has added four men to the organic-chemical sales-department staff: R. S. Haley, New York, N. Y.; J. W. Sackett, Cleveland, Ohio; W. R. Paris, Lowell, Mass.; and R. H. Endres, Pittsburgh, Pa. . . . **FEDERAL PAPER BOARD CO., INC.**, Bogota, N. J.—Has opened a new folding-carton plant in Washington, Pa. . . . **GEIGY DYESTUFFS, DIV. OF GEIGY CHEMICAL CORP.**, Ardsley, N. Y.—Has named J. V. Boone director of laboratories, Charlotte, N. C. . . . **GENERAL ANILINE & FILM CORP.**, New York, N. Y.—Has made major changes in the marketing organization of the Dyestuff & Chemical Div. A key feature is the addition of eight product managers, each responsible for a given line of products. The company has also named H. C. Borghetty general manager of foreign operations.

GENERAL LATEX & CHEMICAL CORP., Cambridge, Mass.—Has elected W. W. Seward vice president. The company has acquired a portion of Stein, Hall & Co., Inc.'s latex-compounding equipment. . . . **GENERAL TIRE & RUBBER CO.**, Akron, Ohio—Has appointed J. L. Patch and his newly formed Outlook Sales organizations as manufacturer's representative for the Plastics Div. . . . **HEYDEN NEWPORT CHEMICAL CORP.**, New York, N. Y.—Has named H. L. Baker general traffic manager. . . . **E. F. HOUGHTON & CO.**, Philadelphia, Pa.—Has promoted F. Ross to vice president in charge of sales and C. R. Schmitt to assistant to the vice president. D. J. Richards has retired as vice president. . . . **JAMES HUNTER MACHINE CO.**, North Adams, Mass.—Plans to build a new plant for its subsidiary, James Hunter, Inc., near Greenville, S. C. . . . **JOHNS-MANVILLE CORP.**, New York, N. Y.—Has proposed a merger with L. O. F. Glass Fibers Co., Toledo, Ohio.

JOHNSON MOTOR LINES-ATLANTIC STATES MOTOR LINES, Charlotte, N. C.—Has started service on the newly installed automatic teletypewriter system known as the 83 B1 system interconnecting its 23 terminals and the New York, N. Y., sales office with the Charlotte headquarters. . . . **LIVINGSTON & HAVEN, INC.**, Charleston, S. C.—Has announced that the long-lap control system is now being produced in England by Textile Machinery Makers Ltd., Oldham, England. Livingston & Haven, Inc., holds exclusive world-wide rights to the device. . . . **KARL LIEBERKNECHT, INC.**, Reading, Pa.—Has announced

 For more data, circle A-123 on Reader Service Card

First

from BALTIMORE

The First POST OFFICE system was initiated in Baltimore in 1774 – by William Goddard.

Courtesy – The Baltimore News-Post

– also from Baltimore...

YOUR *First* CHOICE IN BLACKS

- **DIRECT**
- **ACID**
- **DEVELOPED**
- **ACETATE**
- **FORMALDEHYDE**
- **LOGWOOD**

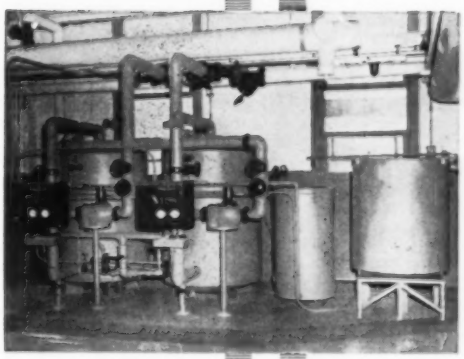
THE HOUSE OF BLACKS

Consult your local dyestuff distributors for information and samples. Shipments can be made from our Baltimore factory.

YOUNG ANILINE WORKS, INC.

OFFICE AND FACTORY: 2701-2733 BOSTON STREET • BALTIMORE 24, MARYLAND

For more data, circle A-124 on Reader Service Card



INVERSAND WATER SOFTENER PLANT

Producing

CLEAR IRON-FREE 100% SOFT WATER

Often for as little as 1¢ per 1000 Gallons

Troubled with harshness, poor finish, uneven shades, redyes, seconds, and other product difficulties—?? The secret of uniformity may lie in your water supply. May we check it for you?

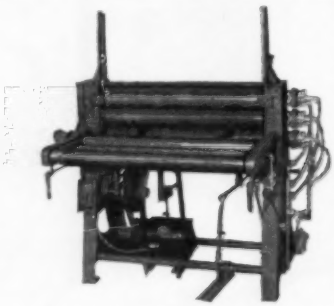
HUNGERFORD & TERRY, INC.

CLAYTON 9, NEW JERSEY

For more data, circle A-125 on Reader Service Card

UTICA 3-Roll Calender

for Steaming
and Calendering
TUBULAR
KNITTED
FABRICS



This fast, efficient 3-roll calender has heated rolls, with patented rotary joints, and flexible metal hose, eliminating packing. A stream of live steam comes in contact with cloth only as it passes over the spreader. A foot pedal to lift rolls apart frees hands to start cloth.

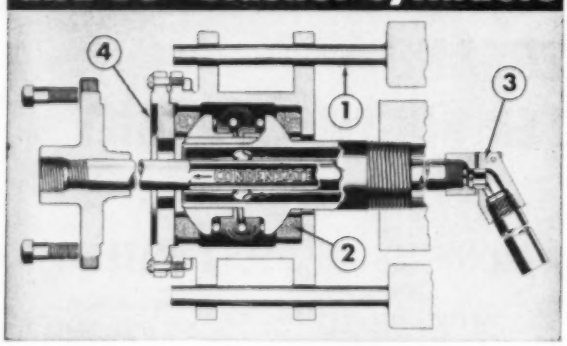
The vari-speed motor is easily and quickly adjusted to any speed. Comes complete. Standard machines made in 36", 42", 48", and 54" width rolls. To special order 60", 66", and 72". For full details on this money and labor saving machine, write today.

2-Roll Calender—Made with heated or cold rolls, plain or felt covered. Has foot pedal to lift rolls apart. Comes complete in same sizes of rolls as 3-roll machines.

UTICA NOVELTY & MILL SPECIALTY CO.
2145 Dwyer Ave., Utica 2, New York
Builders of Textile Machines Since 1903

For more data, circle A-126 on Reader Service Card

For service on Dry Cans and 30" Slasher Cylinders



Type LJSP with Syphon Elbow

Johnson ROTARY PRESSURE **Joints** *First* in the Textile Industry

1. Support rods carry all the real weight. Sealing assembly "floats" freely inside. **2.** Seals without packing—needs no lubrication or adjusting. **3.** Syphon elbow replaces clumsy curved syphon pipe with two straight pipes, passes right through joint. **4.** Assembly plate holds parts in place when head is removed.

Write for Catalog J-2002

Shows Johnson Joints for all needs, on dry cans, print cans, calenders, compressive shrinkage ranges, 5' and 7' cotton slashers, etc.

THE JOHNSON CORPORATION
814 Wood St., Three Rivers, Mich.

For more data, circle A-127 on Reader Service Card

that a company, Kalio Universal, has been formed to serve as exclusive world-wide sales agents for its knitting-machine products.

MORTON MACHINE WORKS, INC., Columbus, Ga.—Will handle sales in North and South Carolina from its office to be located in the Charlotte, N. C., area. . . . **MOUNT HOPE MACHINERY CO.**, Taunton, Mass.—Has built a large new addition to its plant in Taunton. . . . **NATIONAL VULCANIZED FIBRE CO.**, Wilmington, Del.—Has announced that W. H. Brown is manager of the newly formed Marketing Dept. . . . **OAKITE PRODUCTS, INC.**, New York, N. Y.—Has named E. Lingle vice president in charge of industrial sales. . . . **PRUFCOAT LABORATORIES, INC.**, Cambridge, Mass.—Has named R. H. Shaffner Northern division sales manager. . . . **PURITAN CHEMICAL CO.**, Atlanta, Ga.—Has named G. B. Wright district manager for Georgia. . . . **RADIANT HEAT, INC.**, Central Falls, R. I.—Has appointed L. J. Joyal representative in the Greenville, S. C., area. . . . **SACO-LOWELL SHOPS**, Boston, Mass.—Is forming five new divisions within the company. The Textile Machinery Div. will be located at the Easley, S. C., plant, and the Replacement Parts Div. will be located in Greenville, S. C. The Gear and Machine Div. will consist of the Sanford and Jonesboro, N. C., plants; and the Automotive and Agricultural Parts Div. will be centered in Saco, Me. The International Div. will have headquarters in Boston, Mass.

WEST POINT FOUNDRY & MACHINE CO., West Point, Ga., is moving its foundry operation into a new building (shown above) on the outskirts of West Point. Containing over 17,000 sq. ft., the building will house new melting and molding facilities.

SHAPIRO BROS. FACTORS CORP., New York, N. Y.—Has named L. A. McGough assistant vice president. . . . **STANDARD CHEMICAL PRODUCTS, INC.**, Hoboken, N. J.—Has announced that A. E. Hirst is retiring as New England sales representative and will be succeeded by H. H. Pact. . . . **STAUFFER CHEMICAL CO.**, New York, N. Y.—Has announced that sales of Lustraglue will be integrated with the company's Industrial-Sales Div. . . . **STELLAMCOR, INC.**, New York, N. Y.—Has moved its New York office to 10 E. 43rd St. . . . **JAMES TALCOTT, INC.**, New York, N. Y.—Has named H. Marks business representative in the New York office. . . . **CHAS. S. TANNER CO.**, Providence, R. I.—Has opened a new 10,000-sq.-ft. Southern plant in Greenville, S. C. . . . **TOMPKINS BROS. CO.**, Syracuse, N. Y.—Has been reorganized and the following officers have been elected: G. R. Fearon, president; A. W. Ingalls, vice president; P. J. Shea, treasurer; M. Welsh, secretary; W. P. Limbacher, general manager and sales; and R. Yackel, factory superintendent. . . . **TORRINGTON CO.**, Torrington, Conn.—Has named W. R. Reid a vice president.

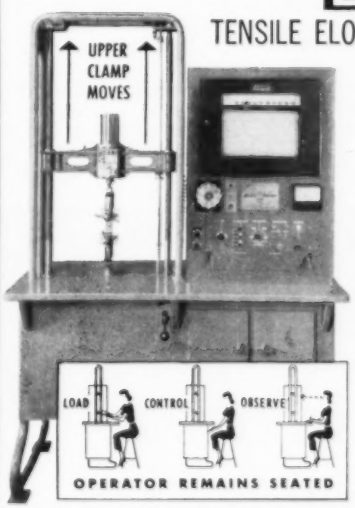
UNION CARBIDE CHEMICALS CO., DIV. OF UNION CARBIDE CORP., New York, N. Y.—Has named H. M. Bartlett, D. H. Sargent, D. W. Simroth, and D. C. Webster to the Development Dept., South Charleston, W. Va. J. J. Berry has been named Kansas City, Mo., district manager; and M. W. Duncan has been named St. Louis, Mo., manager. H. E. Klein is the new district manager of the Chicago, Ill., district. . . . **U. S. RUBBER CO.**, New York, N. Y.—Has appointed L. H. Bruce sales manager. . . . **WALLERSTEIN CO., INC.**, New York, N. Y.—Has acquired Wheeler & Huisking Ltd., a British affiliate.

Unequalled Variety of Clamps and Holding Fixtures!

UPWARDS OF 150

Holding Devices as needed for conformance with ASTM, ISO, and Industry Test Methods are available on the . . .

BRAND NEW SCOTT **CONSTANT RATE-OF EXTENSION** TENSILE ELONGATION TESTER



The universal applicability of the new CRE tensile tester cannot better be appreciated than by considering the unequalled variety of holding devices it utilizes. No other tester offers ultra-precise electric weighing in such complete conformance with accepted methods of test for textiles, rubber, plastics, including tear, lamination, burst and seam construction up to 1,000 lbs. tensile.

From 59 years leadership, Scott offers this new tester of highest known precision . . .

AT AMAZINGLY LOW COST

1. Capacities from 0-.05 lb. to 0-1,000 lbs.
2. Visual verification of "time-to-break" (offered only by Scott).
3. Crosshead travel up to 70".
4. Variable speed of specimen elongation.
5. Registration speeds permit extreme magnification for precise analysis.
6. Unequalled operator convenience and simplicity of operation.

Request new "CRE Bulletin"

SCOTT TESTERS, INC.
95 Blackstone St., Providence, R. I.
Representatives in foreign countries
New Symbol of World-Standard Testing

For more data, circle A-128 on Reader Service Card

For **TEXTILE** *Machinery*

GRATON AND KNIGHT

NYCOR

FLAT BELTING

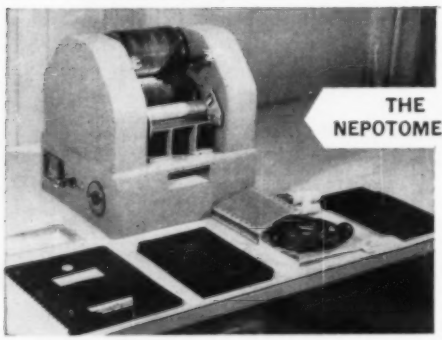
Nycor used on Lickerin and Doffer drives gives you a more positive drive because of its more effective tension. Its stretch-free feature, and its great coefficient of friction will give you more production — eliminate take-ups and reduce maintenance costs.

Send For Brochure on Nycor Belting

GRATON & KNIGHT *Company*
WORCESTER 4, MASSACHUSETTS

For more data, circle A-129 on Reader Service Card

FORECAST NEPPING QUALITIES OF COTTON



Developed at N. C. State College School of Textiles and on view there.

25 grain sample is processed in four minutes and is comparable to your standards of acceptable cotton for each quality of your yarns and fabrics. Literature and price on request.

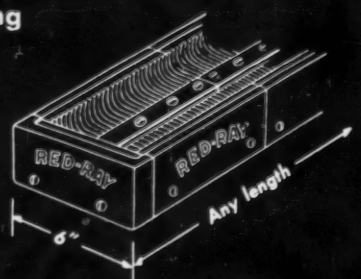
WRIGHT MACHINERY COMPANY
DIVISION OF SPERRY RAND CORPORATION
DURHAM, NORTH CAROLINA
CANADA: Sperry Gyroscope Ottawa Limited
P. O. Box 90, Ottawa, Ontario, Canada
Special Rep. for Nepotometer:
THE FRED S. WHITESIDE CORP.
10 High Street Boston 10, Mass.

For more data, circle A-130 on Reader Service Card

RED-RAY
Infra-Red Gas Burners

- Preheating
- Nylon Setting
- Tenter Frame Drying
- Setting Resins—Pigment Dyes
- Singeing

High Capacity
Compact
Low Cost



Write for further information

RED-RAY MANUFACTURING CO., INC.
318 Cliff Lane Cliffside Park, N. J.
Tel: WHitney 3-1000

NEWS ABOUT MEN

Leon Agatstein has joined Bachmann Worsted Co., Uxbridge, Mass., as vice president in charge of styling and fabrication of the men's-wear woolen and worsted division.

William C. Appleton has resigned as president and a director of Delaware Mills, Inc., New Castle, Del.

R. M. Ashmore, former cotton quality-control head at Judson Mills, Greenville, S. C., has been promoted to laboratory head.

Kent Avery has resigned as assistant to the president at Forstmann Worsted Co., Passaic, N. J.

Nelson Barlow has been named manager of the Blacksburg, S. C., plant of Dodgeville Finishing Co., Dodgeville, Mass.

J. L. Barnett, treasurer of South Fork Mfg. Co. and Perfection Spinning Co., Belmont, N. C., has been named second vice president of the Combed Yarn Spinners Association, Inc.

Arthur Basquil has retired as art director of the Shirting Div., Dan River Mills, Inc., New York, N. Y.

Ralph C. Beard has been appointed plant coordinator in the Vulcan Rubber Products Div., Reeves Bros, Inc., New York, N. Y.

Alex W. Bell, executive vice president of American & Efird Mills, Inc., Mount Holly, N. C., has been advanced from second to first vice president of the Combed Yarn Spinners Association, Inc.

John Cervini has been elected president and general manager of Pacific Textile Processing Co., Hermosa Beach, Calif. He had been manager of manufacturing at Cheney Bros., Manchester, Conn.

Alex Challis has resigned as shift dyer at Fair Lawn Finishing Co., Fair Lawn, N. J.

H. F. Galloway, Jr., overseer of carding at Judson Mills, Greenville, S. C., is being temporarily transferred to the Fiber Quality-Control and Research Dept., Palmetto Service Corp., Union, S. C.

DR. VICTOR L. ERLICH has been elected vice president and director of basic research and development of Reeves Bros., Inc., New York, N. Y.

Shannon M. Gamble, executive vice president of Standard-Coosa-Thatcher Co., Chattanooga, Tenn., has been elected president of the Combed Yarn Spinners Association, Inc.

Thomas Gilmore has been named art director of the Shirting Div., Dan River Mills, Inc., New York, N. Y.

Fred L. Howell, Jr., has been named executive vice president of Kerr Bleaching & Finishing Works, Inc., Concord, N. C.

Jack Hughes has been appointed superintendent of Cone Mills Corp.'s Pineville Plant, Gibsonville, N. C.

John R. Hilton has retired as superintendent of the Mount Vernon Mills, Inc., plant at Columbia, S. C.

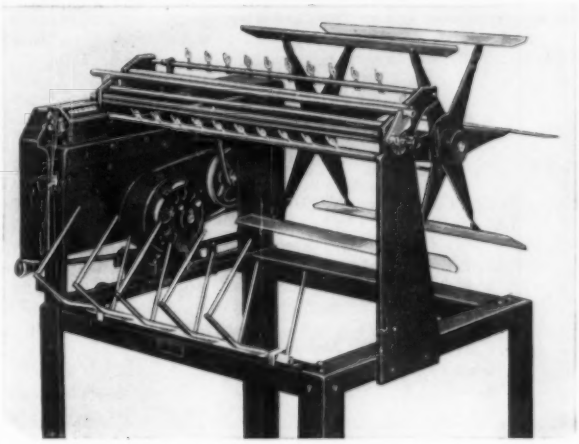
Werner B. Hug has been named a vice president of Frank Ix & Sons, New York, N. Y.

Thomas N. Ingram has been elected assistant secretary-treasurer of the North Carolina Textile Manufacturers Association.

 For more data, circle A-131 on Reader Service Card

APPROVED TEXTILE TESTING APPARATUS

MOTOR DRIVEN TEN SKEIN REEL



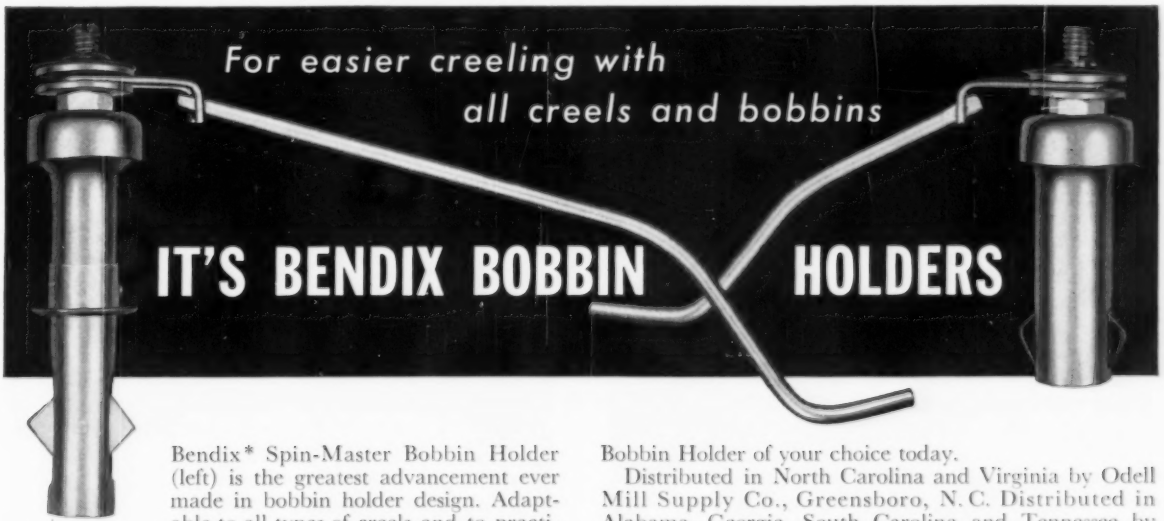
Width 32", Depth 38", Height 48"

New Motor Driven Ten Skein Reel, with pre-determined reset counter, equipped with either a 1 yard, 1½ yard, 1 meter or 1⅛ meter circumference fly, provided with two collapsible arms for relieving tension when removing skeins. All Flies are inter-changeable and if desired, any of the above mentioned peripheries may be ordered separately at any time. This reel available with or without three bar tension device, the center bar adjusted by means of a cam and dial graduated 0-10 for obtaining various tensions.

ALFRED SUTER CO.

200 FIFTH AVE. NEW YORK 10, N. Y.

For more data, circle A-132 on Reader Service Card



Bendix* Spin-Master Bobbin Holder (left) is the greatest advancement ever made in bobbin holder design. Adaptable to all types of creels and to practically all sizes of bobbins, the Spin-Master permits easy, one-hand creeling and has an exclusive nylon latch that eliminates bobbin wear. Easier creeling is also available with the spring type Eclipse Bobbin Holder (right), long-time favorite of the textile industry. Order the Bendix Bobbin Holder of your choice today.

Distributed in North Carolina and Virginia by Odell Mill Supply Co., Greensboro, N.C. Distributed in Alabama, Georgia, South Carolina and Tennessee by Greenville Textile Supply Co., Greenville, S.C. Export Sales: Bendix International, 205 East 42nd Street, New York 17, N.Y. ALSO FURNISHED AS ORIGINAL EQUIPMENT BY LEADING TEXTILE MACHINE MANUFACTURERS.

*REG. U. S. PAT. OFF.

ALL OTHER INQUIRIES TO:

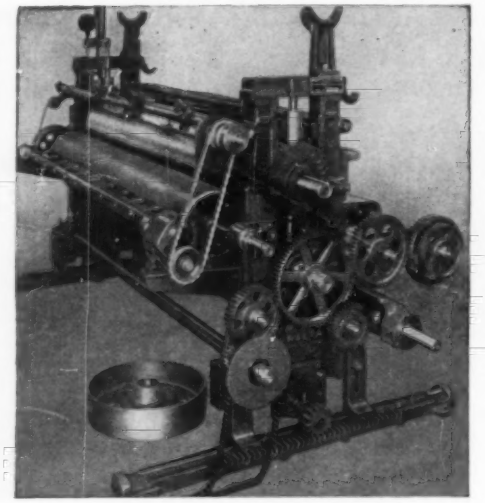
Bendix-Elmira

Eclipse Machine Division, Elmira, New York

Bendix AVIATION CORPORATION

For more data, circle A-133 on Reader Service Card

"CONVERSION UNITS"
WILL INCREASE the EFFICIENCY of your
PERALTA® MACHINES
CONVERT NOW TO OUR NEW DESIGN BY INSTALLING:

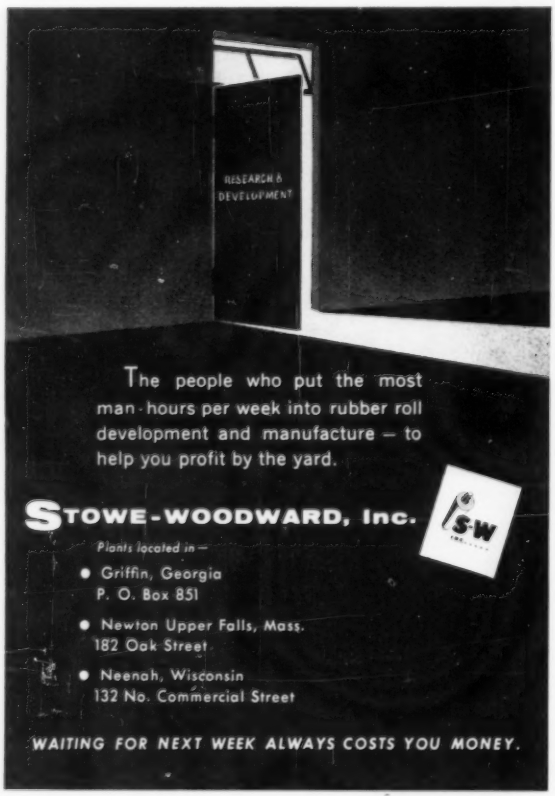


- Off-Set Roll Arrangement
- Doffing Device Attachment
- Hydraulic Pressure

Write us regarding our new type DOUBLE RUB TAPE CONDENSER for adaptation to woolen cards

Duesberg-Bosson of America, Inc.
Main Street Jefferson, Mass. P. O. Box 25

For more data, circle A-134 on Reader Service Card



The people who put the most man-hours per week into rubber roll development and manufacture — to help you profit by the yard.

STOWE-WOODWARD, Inc.

Plants located in —
- Griffin, Georgia
  P. O. Box 851
- Newton Upper Falls, Mass.
  182 Oak Street
- Neenah, Wisconsin
  132 No. Commercial Street

WAITING FOR NEXT WEEK ALWAYS COSTS YOU MONEY.

NEWS ABOUT MEN — Continued

Howard A. Kaiser has been elected president of Burlington Hosiery Co., Greensboro, N. C.

Frank Ledger has been appointed assistant superintendent of the second shift at Fred Whitaker Co., Philadelphia, Pa.

G. E. Low has been appointed an executive vice president of Burlington Hosiery Co., Greensboro, N. C.

W. H. May, Jr., has been named a vice president of Burlington Hosiery Co., Greensboro, N. C.

Mrs. Elsie M. Murphy has been reelected president of S. Stroock & Co., Newburgh, N. Y.

John B. O'Donnell has been named to the newly created post of vice president of Ansonia Mills, Inc., Taunton, Mass.

Lawrence Oliver has been named general plant superintendent of Great Falls Bleachery & Dye Works, Inc., Somersworth, N. H.

Brackett Parsons has been reelected president of Pepperell Mfg. Co., Boston, Mass.

A. Ward Peacock has been elected secretary of Erwin Mills, Inc., Durham, N. C.

Horace Pennington has been named manager of the Dwight Div., Cone Mills Corp., Gadsden, Ala.

A. Bryon Reed has been named a vice president of Munsingwear, Inc., Minneapolis, Minn., and has been appointed general manager of the women's and children's division.

A. D. Robinson has resigned as executive vice president of Kerr Bleaching & Finishing Works, Inc., Concord, N. C.

Thomas B. Sain has been appointed an executive vice president of Burlington Hosiery Co., Greensboro, N. C. He will continue to be in charge of all manufacturing operations, with headquarters in Greensboro.

Henry A. Scheyer has been named president of North Bergen Piece Dye Works, Inc., North Bergen, N. J.

W. Ray Shockly has been transferred to the Charlotte, N. C., office of American Cotton Manufacturers Institute, Inc., in an administrative capacity.

E. R. Stewart has been named manager of manufacturing and production at Code Felt & Knitting Co. Ltd., Perth, Ont.

Mrs. Pola Stout has been retained as designer-consultant by J. P. Stevens & Co., Inc., New York, N. Y.

John W. Sweeney has retired as executive vice president of the Textile Div., Narrow Fabric Co., Reading, Pa.

ALEXANDER WESTREICH (left) has been named chairman of the board of the Pellon Corp., New York, N. Y., and SVEN STERNBERG (right) has been named president.

 For more data, circle A-135 on Reader Service Card

OVER 30 YEARS OF "GOOD BREEDING" HAS PRODUCED MAXIMUM DESIZING EFFICIENCY AT HIGH TEMPERATURES IN RAPIDASE® FOR DESIZING

a product of **WALLERSTEIN COMPANY, INC.**
Enzymologists to American Industry
180 Madison Avenue, New York 16, N. Y.

NOW AVAILABLE
the new, most concentrated liquid
RAPIDASE-800
for maximum economy in shipping and storage where a liquid desizer is preferred
also: RAPIDASE 2M
RAPIDASE CONCENTRATED
RAPIDASE M
RAPIDASE
and the extra-convenient powdered product **RAPIDASE-Z,** in drums or in precision-packed 2-oz. and 8-oz. moisture-proof envelopes.

For more data, circle A-136 on Reader Service Card

IF THIS IS YOUR PROBLEM

If you need effective, highly readable, smartly illustrated company literature (booklets, pamphlets, manuals) to display your products, inform the public of your operations, attract key personnel to your plant, train employees, and perform any of the other communicative functions that are vital to your business . . .

THIS IS YOUR ANSWER

The McGraw-Hill TECHNICAL WRITING SERVICE has a staff of more than 150 highly-trained writers, editors, and illustration specialists whose job it is to create technical and general literature for industry. We write, illustrate, design, and print Equipment Manuals, Product Bulletins, Handbooks, Company Histories, Annual Reports, and other specialized material. Save money and time. Let our staff be your staff for Technical and Business publications.

This service is available through ad agencies.

Write • Phone

TECHNICAL WRITING SERVICE
McGraw-Hill Book Co., Inc.
330 W. 42nd St., N. Y. 36, N. Y.
LOngacre 4-3000

GUARANTEED

to give drip-tight leak-proof seal

greatest name in unions

DART

For over 55 years the firm guarantee back of each and every DART UNION sold has been — *"if one should leak through we will give you two"!* The record reveals that less than 1 in every 100,000 has proven to be faulty. The extra wide bronze to bronze seats, precision ground to a true ball joint, mounted in heavy malleable iron pipe ends and protected by an extra heavy union nut, make a drip-tight, leak-proof connection WITHOUT EXCESSIVE WRENCHING time and time again.

Guarantee positive tight connections and extra long service on your pipe lines by using the DART GUARANTEED UNION.

Yours on request: Descriptive brochure on Dart Unions and Union Fittings.

DART UNIONS *Products of* **DART UNION COMPANY** PROVIDENCE 5, R. I.

GENERAL SALES AGENT
THE Fairbanks COMPANY
393 LAFAYETTE STREET, NEW YORK 3, NEW YORK
BRANCHES: NEW YORK 3
PITTSBURGH 22 • BOSTON 10 • ROME, GEORGIA

For more data, circle A-137 on Reader Service Card

Industrial Engineers

MODERNIZATION PROGRAMS
PLANT LAYOUTS
MANAGEMENT PROBLEMS
WORK LOAD STUDIES
COST REDUCTION REPORTS
COST SYSTEMS
SPECIAL REPORTS

Specializing in Textiles Since 1914

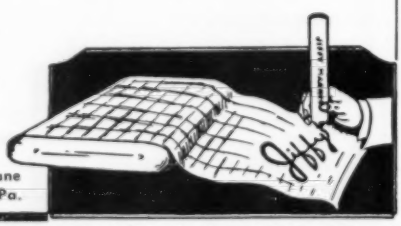
RALPH E. LOPER CO.
GREENVILLE, S. C. Dial CEdar 2-3868
FALL RIVER, MASS. Dial OSborne 6-8261

For more data, circle A-138 on Reader Service Card

JIFFY TEXTILE MARKER

For use on rayon, cotton and woolen material. Dye resistant and boil-proof, permanent, inexpensive, quick and easy to use.

For information address
JIFFY TEXTILE MARKER CO.
406 W. School Lane
Philadelphia 44, Pa.



For more data, circle A-139 on Reader Service Card

G. S. HAND TACHOMETERS and SPEED INDICATORS
for MAXIMUM PRODUCTION

IDEAL FOR MOTORS • SHAFTS • SPINDLES • LOOMS • TURBINES • FOR TEXTILE AND POWER PLANTS.

1% Accuracy for any range from 30 to 100,000 RPM or surface speed. Antimagnetic durable mechanism. Efficient repair service at moderate charges.

WRITE FOR ILLUSTRATED FOLDER

GEORGE SCHERR CO., Inc.
200-F LAFAYETTE STREET • NEW YORK 12, N.Y.

For more data, circle A-140 on Reader Service Card

When You Change Your Address . .

It will help us to keep your copies of TEXTILE WORLD coming to you each month if you will promptly advise us of any change of address.

Circulation Manager
TEXTILE WORLD,
330 West 42nd St., New York 36, N. Y.

Please change the address of my Textile World subscription.

Name .....
Old Address .....
New Address .....
New Company Connection .....
New Title or Position .....

NEWS ABOUT MEN Continued

J. Thibodeau has been named overseer of finishing at Kennebec Mills, Fairfield, Me.

Harris Thompson has been named head of the upholstery division of Abbeville Mills Corp., Inc., Abbeville, S. C.

Anthony Tumminello has joined Housatonic Dyeing & Printing Co., Derby, Conn., as head printer.

Delbert Wayman has been appointed overseer of spinning for Adler Co., Cincinnati, Ohio.

George West has been transferred from Reeves Bros., Inc.'s New York, N. Y., headquarters to the Buena Vista, Va., plant to become technical manager of development of the Vulcan Rubber Products Div.

Henry West has been named overseer of weaving at Northfield Mills, Inc., Northfield, Vt.

Harold Wisan has been elected to the board of directors of the Lamport Co., Inc., New York, N. Y.

F. E. GRIER, president of Abney Mills, Greenwood, S. C., will be presented with the annual award of the Textile Section of the New York Board of Trade on Nov. 13.

John W. Wood, Jr., has been named superintendent of Plant No. 2 of Republic Cotton Mills, a unit of J. P. Stevens & Co., Great Falls, S. C.

Joseph H. Wright, II, has been elected president of Davenport Hosiery Mills, Inc., Chattanooga, Tenn.

Textile World

OBITUARY

Pinkney Odell Brannon, 52, general superintendent of Republic Cotton Mills, a division of J. P. Stevens & Co., Inc., Great Falls, S. C.

John H. Callen, 57, vice president of Peerless Woolen Mills, New York, N. Y.

Thomas Leo Cotter, assistant sales manager of Universal Winding Co., Providence, R. I.

Ira Watson Dixon, 58, president and treasurer of Kirkman-Dixon Machinery Co., Greenwood, S. C.

Lyon Alfred Every, 40, an official of Clayton-Every Rug Mill, Rock Hill, S. C.

Charles Francis Foster, 81, president of Hazel Knitting Co. and Foster Hosiery Mills, Burlington, N. C.

Eugene Gilfillin, 83, member of the board of directors of Piedmont Plush Mills, Greenville, S. C.

Elliot K. Ludington, 82, chairman of the board of directors of Chase Bag Co., New York, N. Y.

Howard E. Newton, 74, president of Trio Mfg. Co., Forsyth, Ga.

Josephus D. Pell, president of Angle Silk Mills, Inc., Rocky Mount, N. C.

Edward T. Pickard, 72, former executive secretary and treasurer of the Textile Research Institute, Princeton, N. J.

Henry Roberts Stevenson, 69, president of Southern Bleachery & Print Works, Inc., Taylors, S. C.

Ernest C. Woodward, 70, retired treasurer of Rockland Webbing Co., Rockland, Mass.

CLASSIFIED SEARCHLIGHT SECTION ADVERTISING

EMPLOYMENT • BUSINESS • OPPORTUNITIES • EQUIPMENT—USED or RESALE

DISPLAYED RATE

The advertising rate is $14.25 per inch for all advertising appearing on other than a contract basis. Contract rates quoted on request.

EMPLOYMENT OPPORTUNITIES — $16.67 per inch subject to agency commission.

INFORMATION:

DISCOUNT OF 10% if full payment is made in advance for four consecutive insertions of undisplayed ads (not including proposals).

An ADVERTISING INCH is measured 7/8 inch vertically on one column, 3 columns—30 inches —to a page.

UNDISPLAYED RATE

(Not available for Equipment Advertising) $1.50 a line. Minimum 3 lines. To figure advance payment count 5 average words as a line. (See ¶ on Box Numbers.)

POSITION WANTED undisplayed rate is one half of above rate, payable in advance.

BOX NUMBERS count one additional line.

Send New ADS or Inquiries to Class. Adv. of Textile World, P. O. Box 12, New York 36, N. Y., For December Issue Closing November 14th.

MILL MANAGER

Twenty years experience in top management of nationally known Textile Concerns. Desires change. Well versed in Mill Administration. Knows loom, preparatory and throwing operations, fabric construction. Able to solve Finishing problems. Write to

PW-9025, Textile World
Class. Adv. Div., P.O. Box 12, N.Y. 36, N.Y.

FOR ADDITIONAL INFORMATION

About Classified Advertising

Contact The McGraw-Hill Office Nearest You

ATLANTA, 3
1301 Rhodes-Haverty Bldg.
JAckson 3-6951
W. O. CRANK

DETROIT, 26
F. E. HOLLAND
856 Penobscot Bldg.
WOodward 2-1793
D. M. WATSON

BOSTON, 16
350 Park Square
HUbbard 2-7160
D. J. CASSIDY

LOS ANGELES, 17
1125 W. 6th St.
HUntley 2-5450
R. L. YOCOM

CHICAGO, 11
520 No. Michigan Ave.
MOhawk 4-5800
W. J. HIGGINS
D. C. JACKMAN

NEW YORK, 36
500 Fifth Ave.
OXford 5-5959
R. P. LAWLESS
D. T. COSTER

CLEVELAND, 3
1164 Illuminating Bldg.
SUperior 1-7000
W. B. SULLIVAN
F. X. ROBERTS

PHILADELPHIA, 3
Six Penn Center Plaza
LOcust 8-4330
H. W. BOZARTH
T. W. McCLURE

DALLAS, 1
901 Vaughan Bldg.
1712 Commerce St.
RIverside 7-5117
GORDON JONES

SAN FRANCISCO, 4
68 Post St.
DOuglas 2-4600
W. C. WOOLSTON

ADDRESS BOX NO. REPLIES TO: Box No. Classified Adv. Div. of this publication. Send to office nearest you.
NEW YORK 36: P. O. BOX 12
CHICAGO 11: 520 N. Michigan Ave.
SAN FRANCISCO 4: 68 Post St.

POSITION VACANT

Wanted Hosiery Dyer—to be an assistant in dye house of large Midwest Hosiery Co. Laboratory experience essential. Give details of training, experience, age and salary desires. P-9094, Textile World.

POSITIONS WANTED

Supt.—Plant Manager—Supervisor—twenty-five years experience throwing, including stretch, bulk and novelty threads. Warping and slashing on cotton and silk systems. Knowledge of production and quality control, costs, and incentives. Best of industrial relations—willing to relocate. PW-9171, Textile World.

Master Mechanic available 13 years experience large mills, trouble shooting, all departments air compressors, wiring, piping and etc. PW-9168, Textile World.

Knitwear Designer and Production Manager (British Subject resident in England with 30 years' English and Continental experience seeks appropriate situation in U.S.A. PW-9079, Textile World.

WANTED

Anything within reason that is wanted in the field served by Textile World can be quickly located through bringing it to the attention of the thousands of men whose interest is assured because this is the business paper they read.

LEGAL NOTICE

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233)
SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION

Of Textile World published monthly at Albany, New York for October 1, 1958.

1. The names and addresses of the publisher, editor, managing editor, and business manager are: Published by McGraw-Hill Publishing Company, Inc., 330 West 42nd Street, New York 36, N. Y.; Editor, Prentice M. Thomas, 330 West 42nd St., New York 36, N. Y.; Managing editor, Louise E. Wille, 330 West 42nd Street, New York 36, N. Y.; Business manager, Thomas Macaluso, 330 West 42nd Street, New York 36, N. Y.

2. The owner is McGraw-Hill Publishing Company, Inc., 330 West 42nd St., New York 36, N. Y. Stockholders holding 1% or more of stock are Donald C. McGraw & Willard T. Chevalier, Trustees under Indenture of Trust m/b James H. McGraw, dated 1/14/21 as modified; Donald C. McGraw & Harold W. McGraw, Trustees under an Indenture of Trust m/b James H. McGraw, dated 7/1/37 as amended; Donald C. McGraw, individually; Harold W. McGraw, individually; Elizabeth M. Webster, c/o Donald C. McGraw (all of 330 West 42nd St., New York 36, N. Y.); Mildred W. McGraw, Madison, New Jersey; Grace W. Mehren, 536 Arenas St., La Jolla, Calif.; Affiliated Fund, Inc., 67 Wall St., New York, N. Y.; Genoy & Co., P. O. Box 491 Church St. Station, New York, N. Y.; Touchstone & Co., c/o Wellington Fund, Inc., Claymont, Delaware.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

McGRAW-HILL PUBLISHING COMPANY, INC.
By JOHN J. COOKE, Secretary.

Sworn to and subscribed before me this 8th day of September, 1958.
[SEAL] JANET A. HARTWICK.
(My Commission expires March 30, 1959)

TEXTILE ENGINEER

Graduate engineer with some experience for key position with major rubber company. Responsible for development of new or improved tire fabrics, specifications, quality control and evaluation work in laboratory. Will also handle special projects covering new processes for cord treatment at textile plants. May occasionally meet with fabric suppliers in joint program discussions. Further details will be furnished confidentially.

Write and give us your background as to experience, education, salary requirements, etc.

P-9141, Textile World
520 N. Michigan Ave., Chicago 11, Ill.

TEXTILE MANUFACTURERS-PROCESSORS

Invest capital &/or machinery in running factory in India as joint venture. For details, contact

BO-9082, Textile World
Class. Adv. Div., P.O. Box 12, N.Y. 36, N.Y.

WE WANT TO BUY

1 Stainless Steel 8 Bowl Rope Washer
3 Foster Model 35 Winders with 8" Traverse
2 Foster Model 23 or 24 Winders
1 Foster Skein Winder
3 Foster Model 102 Winders
36 Spindles Foster Model 77 Winders
1 Foster Doubler 8" Travis, Model 56
2 Foster Doublers 6 or 7" Travis, Model 57
24 C&K C-4 Looms 68" between swords, 20 to 25 harness dobbies, also 16 with Gem Heads.

H. C. SKELTON, INC.,
Textile Machinery,
Telephone: HAZEL 7-3737 - Union, South Carolina

WANTED
BROADCLOTH MILL FOR EXPORT

Annual capacity 3 to 6 million yard, preferably fully integrated from spinning through finishing.

CASH OR PARTICIPATION.

Write: Suite 336, Empire State Building, New York 1, N. Y.

WANTED:

Extractor

American Perry type, 54-inch diameter, removable baskets.

W-8904, Textile World
68 Post St., San Francisco 4, Calif.

WANTED
Beam Dyeing Unit Stainless Steel

Reply: **W-9091**, Textile World
Class. Adv. Div., P.O. Box 12, N.Y. 36, N.Y.

2 FOSTER Mod. 102
100 SF., 7" Trav. 5/8" x 1 5/8" Tubes

1—KIDDE-SIPP
54" WARPER—1957

1—SIPP MODEL GK
REDRAW—1955

1 COCKER REBEAMER

FORK LIFT TRUCKS

4—FIDELITY
SKEIN REELERS

SCHWEITER WINDERS
2—12 SPINDLE—3 RING
1—15 SPINDLE—THIN LIP

24—U. S.—FACE DRIVE
UPTWISTERS

5—S. S. TANKS

10—DRAPER 64"
LOOMS—1950

4—U. S. 1 LB. DOUBLERS

8 ATWOOD UTILITY
D.D. UPTWISTERS

3000 B.B. SPINDLES

1—ATWOOD 2 LB. 10B

250 UNIVERSAL
CONERS #50

4 U. S. HI-SPEED
SPINDLESS SPOOLERS

4—U. S. Vertical
Spoolers

SMITH DRUM SKEIN
CASCADE DYERS
2—20 ARM
1—12 ARM 1—7 ARM

2—84" F.N.F. Tricot
1—10 x 5 Roving Frame

BOBBINS—SPOOLS—QUILLS—*All Sizes & Types*

PENNSYLVANIA SPOOL & EQUIPMENT CO.

425 LEHIGH ST. ALLENTOWN PA. Phone 3-7545

COMPRESSORS-VACUUM PUMPS
FOR THE FINEST IN REBUILTS

1902 **AMERICAN** 1958

137 CFM 100 psi 7x7 Ingersoll ES1
234 CFM 135 psi 9x9 & Ing. ES1
283 CFM 35 psi 10x7 Ingersoll ES1
321 CFM 125 psi 10x11 Ing. ES1
437 CFM 40 psi 12x9 Ing. ES New Cylinder
465 CFM 100 psi 12x11 Ing. ES1
505 CFM 125psi 12x13 Worth HB (unused)
590 CFM 125 psi 13½—8x8 Penn DE2-3-60-220
686 CFM 100 psi 14x13 Ing. ES Worth-HB

860 CFM 125 psi 150 HP
13—8x7 Joy WN102
150 HP 3-60-440

920 CFM 110 psi 18-11x12 CP-OCE 50 HP GE Syn 3-60-440
1016 CFM 55 psi 17x13 Ing. ES

973 CFM 125 psi
16—10x7 Ing XLE
150 HP Syn-3-60-440

1270 CFM 40 psi 19x13 Ing. ES-1
1410 CFM 35 psi 20x13 Worth HB
1552 CFM 125 psi 18½-11½x8½ IRXLE

1700 CFM 100 psi 300 HP
23—14x16 Ing. PRE2 3-60-2300

American Air Compressor Corp.
Del & Tex Streets North Bergen, N. J.

Largest Offering Modern Machinery
for:
DYEING • FINISHING • PRINTING • BLEACHING
From a Single Machine to a Complete Plant

WRITE WIRE PHONE

SOUTHERN OFFICE
IPA SOUTHERN, INC.
610 S. Carolina Nat. Bk. Bldg
Greenville, South Carolina
Tel: Cedar 2-3561

IPA

NORTHERN OFFICE
INDUSTRIAL PRODUCTS OF AMERICA
140 Market St., Paterson, N. J.
Tel. Sherwood 2-6614 Cable: Texindus

FOR SALE!

1—14 color 64" Print Machine
1—14 color 54" Print Machine
2— 8 color 44" Print Machines
1— 1 color 60" Print Machine
1—72" Hydraulic Forcing Jack
1—English 60" Impression Machine

JAMES E. FITZGERALD
10 Purchase St. Tel. OS 8-5616 Fall River, Mass.

MILLER MACHINERY CO.
66 RAILROAD AVE. PATERSON, N. J.
Tel. Sh 2-5467-8

Textile Machinery and Supplies
BOUGHT AND SOLD
Warpers • Winders & Quillers • Looms

BETTER MACHINERY WILL HELP YOUR MILL

3—S/L 3-beater S.P. Pickers 40" & 45"
90—Whitin Flat Top Cards 40" & 45"
10—S/L 1943 12-head combers
2000—LIKE NEW 12" x 36" Roving Cans
6—Saco-Pettee 9 x 4½ Superdraft
6—Saco-Lowell 8 x 4 FS-2
40—Frames S-L Drawing, 15 x 42 coilers
4—B/C Warpers & Creels, 54½" & 66½"
4—Whitin Twisters, 3" ring, 176 Sp.
5—Foster 102 Winders, 7" traverse
1—40-sp. Roto-Coner, 9"36" paper cones
3—120-sp. Roto-Coners, Franklin springs
2—Abbott 12-sp. Radial Quillers, 1953
5—Abbott Auto. Quillers, w/hoppers
5000—New & Used Pinboards, 80 pin
2—Abbott Pinboard attach., 96 pins
2—Hermas 48" Vertical Shearers, 1948
3—C&M Cloth Folders, Air lift
20—64" XD Looms, 20 harness dobby
40—68" Mod. D Looms, Gem Heads
24—C&K W-3 4x1 Conv. 82"

250—40" XP Looms, 20 harness dobby, 1945-8
380—40" X2 Looms, Spring Tops
170—40" K Looms, Cam & Dobby
4—46" XDC Looms, 2 x 1 Box
9—B/C Tying-in Machines, LC, LS, LL K
1200—Loom Motors, ½HP to 1½ HP, all voltages
300M—7-3/8" #5 A.L. Bobbins for Quiller
60M—8" #5 A.L. Bobbins for Quiller
80M—7-3/8" #6 A.L. Bobbins
90M—8-¾" A.L. Bobbins
150M—9½" A.L. Bobbins
4—million Steel Heddles, 10", 11", 12", 13", 14"
1—million Drawtex Heddles 12", 14", 15"
60—NEW Loom Beams, 44" btwn 24" heads
500—V/R 3-shift Reset Pick Counters
300—6-bank sliding bar stop motions
5—million Drop Wires, all types & weights
2—Abington Pumps & Tanks, 30 HP & 40 HP
2—500 Lb. & one (1) 4000 lb. Electric Hoists
2—IR Compressors 10x10 & 8x6

MACHINERY SALES CORPORATION
22 ELM STREET, P.O. BOX 367
New Bedford, Mass Wyman 6-2271

MODERN MACHINERY — For Sale

1—Set Hunter 84" Squeeze Rolls
1—Gessner 84" x 36" Semi-Decater, 1951
6—P. & S. Double Drum Cell. Condenser, 1952
1—P. & S. 48" Mod. 513 Bale Breaker Feed, 1944
1—D. & F. Sample Card 11" x 15", 1953
1—P. & S. 36", 8 bar Picker w/ntr. & Blower
1—Brownell Flyer Twister, 64 sp., 1950
1—Scribner 500 lb. s/s Stock Dye Kettle, w/Temp. Controls
1—Universal 8 sp. Roto Coner, 9" 15' Cones

FRANK W. WHEELER CO.
Adams Ave. & Wingohocking St.
Philadelphia 24, Pa. Phone JEfferson 5-4771

TEXTILE AUXILIARIES INC.

"Buildings at Paramount Printing & Finishing Co. Are Being Sold"
"Equipment Must Be Disposed of at Prices Never Heard of Before"

1—8-Color & T—6-Color 44" Rice, Barton & Fales Complete Print Machines
1—3-Color 50" Rice, Barton & Fales Printing Machine
2—Butterworth 50" Tommy Dodd Backfillers, S.S. Boxes & Agitators
1—30" Vat Ager, Ball Bearing 50" Rolls
1—54" Butterworth Friction Calender
1—10-Fan National Loop Dryer 90" wide, Revolving Sticks
1—9-Nip Open Soaper 50" face, Double Gear & Chain Drive
1—Van Vlaanderen Centrifugal 50" Extractor
Also, Spare Calender Rolls & Padder Rolls, All Sizes.
These are only a few items: For Detailed List Write, Wire or Phone:

DEXTER 1-9650 146 WEST RIVER STREET

PROVIDENCE, R. I.

2 VV 40" x 60' Tenter Frames
2 72" Scutchers
1 Werner 60" Microset Padde-
1 set 15 Werner 70" SS cans B3 & Johnson joints w/L4 Nash pump
1 VV-60" quetch
SS dye becks 5'-15'
1 VV-70" tensionless tuber
2 Morrison 70" Dye Jiggs
1 set of 21 141" SS cans BB Johnson joints, etc.
1 VV 60" Decatizer Late Style w/69" blanket
1 VV 60" Singeing Machine
1 66" VV Palmer, Low Type

MAR-DAY TEXTILES
52-60 BERKSHIRE AVE., PATERSON 2, N. J.
MU-4-5132

LIQUIDATION SALES by REPUBLIC

WHERE YOU GET THE ADDED PLUS OF DEPENDABILITY

MONTROSE-HALEDON TEXTILE PROCESSORS, HALEDON, N..J.

Dyeing, Finishing and Printing Plant

1—V. V. Super Finishing Range, 70′ x 66″, Nat'l. gas Housing—1956
1—V. V. Hyd. Calender, 70″, 15 ton, 1949
1—Verduin Hyd. Padder 60″, 6 ton—1951
1—V. V. Stainless Rope Washer 12 comp'ts.
1—Nat'l Model E Loop Dryer, 102″ 8 fans
1—Werner Hyd. Schreiner Calender 50″ 50 ton, 1956
1—Burlington Pressure Beam Dyer 64″, 1948
4—V. V. Stainless Dye Jiggs, 70″
6—Werner Stainless Dye Jiggs
1—V. V. Palmer Tenter Unit
4—R. B. & F. Print Machines, 8 Color 50″, 8 Color 58″, 6 Color 48″, 4 Color 48″.

1000—Copper Rollers W Bore

NEW LIQUIDATION SALE: KANMAK MILLS, KULPMONT, PA.

Throwing, Knitting, Narrow Fabrics, Weaving and Dyeing & Finishing for Elastic and Other Fabrics

48—H & B Rubber Cover. Mach, 96 Arnold spdls., type C.
96—Spdls. Whitin Schweiter Quillers
1—S-E Warper 101″, DY, 820 end Creel.
48—C & K W-3 Looms, 82″, 16 convert, elastic attach, 1951-2
8—Kiddie Raschel, model C, 101″
2—Kiddie Raschel, model B, 100″
1—R-H Pneu. Padder, 66″, 12 ton
8—V. V. Tensionless Auto. Jiggs, 60-70″, 1951
1—RL Stainless Encl. 8′ Dye Box, deep
1—Planter Hyd. Padder, 72″, 12 ton
1—Johnson 9 Drum Slasher, D.C. Drive, 1957
10—U.S. Textile Up Twisters, 160 spdls., large package
28—Narrow Fabrics Looms, 22′ 20 72 sp. 4-48 sp. 4-108 sp.
14—Reiner Kaylooms, 8-two 64″, 6-128″, 1941-6
1—Allen Rubber Warper & Rebeamer Unit 1955
1—Morrison Tenter Range, 80′ x 60″ W/V. V. hyd. Padder
1—A & G Loop Dryer, 27″ long

ST. CROIX MILL, MILLTOWN, NEW BRUNSWICK

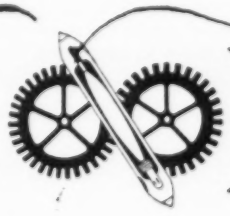
20—Whitin F2 Spin. Frames, 240 spdls., 4″ ga. 1947
4—Abbott Quill Winders, 100 spdls. pinboard, 1953
64—C & K Looms, C-4, 78″, 20 harness 1949
1—V. V. Hyd Calender, 80 tons, 65″ 1948

UNITED PIECE DYE WORKS, LODI, NEW JERSEY

1—V. V. Finishing Range 90′-62″ Nat'l Housing, 1941-6
20—Blickman Stainless Steel Encl. Dye Boxes, 6′ and 12′ wide.
4—V. V. Duplex Stainless dye boxes 12′
1—Nat'l Loop Dryer, Model E, 110″ 20 fans, 1947
1—Morrison Stainless Williams Washer 60″
3—Mulhouse Print Mach, 12 colors 63″ wide
1—R. B. F. 12-color print mach 52″ wide
1—R. B. F. 3-Color Print Mach., 52″ wide.

OTHER LOCATIONS

18—C & K C-4 Looms, 78″ convert. 1949
80—C & K W-3 92″ Looms, 4 x 1 Box
1—Shriver Filter Press, 24 x 24, 1953
14—Draper XD Looms, 64″, Motor
1—Hunter 9-Bowl Washer, 90″, 1952



Republic

TEXTILE EQUIPMENT COMPANY

40 Worth Street, New York 13, N. Y. • COrtlandt 7-1591

• APPRAISALS • PURCHASE AND SALE TEXTILE MACHINERY • LIQUIDATION OF MILL PROPERTIES •

LIQUIDATION SALE

1—3 roll 54" Friction Calender—2 Steel & 1 Husk.
1—Merrow 60 BDB with Motor & Table—$140.
1—64" Measuregraph Examiner & Tuber.
3—Nash L4 L5 L6 Pumps.
2—65" V.V. Tensionless Tubers 1955—$800 ea.
6—60" Werner Dye Jiggs, stainless.
1—P & W 80" Brushing & Sanding Machine.
1—V.V. Low Palmer, Tenter, Pad Unit.
1—Brand New 67" Pneumatic Padder, 2 rubber rolls—15 ton.
3—54" Embossing Machines.
1—V.V. 40' x 62" Tenter, S.S. Clips, closed gears.
2—72" Scutchers, Vari-Speed Drives.
1—V.V. 65" Singeing Machine—1952—Automatic Controls, 2 Burners, S.S. Cooling Drums.
3—Link Belt P.I.V. Drive Units VM5, 4 to 1, direct driven 10 H.P. Motor 220/440/60.
1—64" Progressive Tuber, Hi-Speed—$550.00
10—5' to 16' S.S. Dye Becks, Tensionless.
1—60' V.V. Tenter Frame, S.S. Clips.
1—Woonsocket Napper, 86" wide, 36 rolls, double acting, ball bearing rolls, clothing like new—$1500.00.
1—10 Can Dryer, 18" face.
3—Sets of Rubber Squeezers 18" x 18".
1—Card Cutter, Fine Index—$200.00.

A & M BLANK CO., INC.

301-313 East 22nd St. (at 7th Ave.) Paterson, N.J.

SHerwood 2-1367-8

PROCESS EQUIPMENT

Agitators, Centrifugals, Filters, Kettles, Tanks. New Stainless Steel Fabrication

PERRY EQUIPMENT CORP.
1430 N. 6th St. Phila. 22, Pa.
POplar 3-3505

FOR SALE

1-OL Cop or Bobbin Winder 20 Spdl.
2-OL Cop or Bobbin Winder 30 Spdl.
1-OL Cop or Bobbin Winder 10 Spdl.

AMBLER TEXTILE MACH. CO.
S. E. Corner Bodine & York Sts.
Philadelphia 33, Pa.

FOR SALE

6 Brand new Platts motorized

LAP CONVERTERS

for carding carpets yarn.

FS-9146, Textile World
Class. Adv. Div., P.O. Box 12, N.Y. 36, N.Y.

We own and offer for sale . . .

P & W 3-Blade Davidson Shear with Motor, Folder, etc.
6 C & K 92" W-3 Automatic Looms, 1945
5 Foot Power Sewing Machines
1 S.S. Portable Scray
1 Roy Napper Grinder 100"
1 P & W Semi Decater, 1947, Pump, etc.
2 Sargent Bagging Machine
14 Waste End Blowers—110v
1 Warp Compressor 96" Beamer
36 C & K 82" W-3 Automatic Looms
2 Collins Fancy Twisters, 200 Spindles
1 D & F 2 Cyl Worsted Cards 60" x 54"
30 Spindles Whitin Schweiter Winders
2 Scutchers 72" and 78", complete
4 U. S. Redraws—1951
1 Gessner 78" Vacuum Extractor
1 D&F 48" Fearnaught Pickers with feeds
2 Cloth Numbering Machine
100,000 Filling Bobbins 8¾"
Nash Pumps all sizes
14 Fiber Trucks like new

RUBBER ROLLS • BEAMS • MOTORS • HARNESS FRAMES

• NOVEMBER SPECIAL •

28 C&K 80" W3 AUTOMATIC LOOMS $200.00 EA.

Write, Wire, or Phone Today—

ATCO

ADVANCED TEXTILE COMPANY

P. O. Box 661 • STuart 1-3633 • Providence, R. I.

SEARCHLIGHT Equipment Spotting Service

This service is aimed at helping you, the reader of "SEARCHLIGHT", to locate Surplus New and Used textile equipment **not currently advertised.** (This service is for USER-BUYERS only) No charge or obligation.

How to use: Check the dealer ads to see if what you want is not currently advertised. If not, send us the specifications of the equipment wanted on the coupon below, or on your own company letterhead to:

Searchlight Equipment
Spotting Service
c/o TEXTILE WORLD
P. O. Box 12
N. Y. 36, N. Y.

Your requirements will be brought promptly to the attention of the equipment dealers advertising in this section. You will receive replies directly from them.

Searchlight Equipment Spotting Service
c/o TEXTILE WORLD
P. O. Box 12, N. Y. 36, N. Y.

Please help us locate the following equipment:

.....
.....
.....

NAME ..... TITLE .....

COMPANY .....

STREET .....

CITY .....ZONE.....STATE.....

11/58

BIALEK'S BEST BUYS

PRIVATE LIQUIDATION SALE OF KANMAK MILLS, KULPMONT, PA.

48—W-3, 82", 4x1 Conv.
48—H&B Rubber Covering
102—C&K Looms, S-3, Whitin Auto. Quillers
30—C&K 21" Narrow Fabric Looms
Reiner Warpers, BW & SW
5—Atwood 10B Johnson Slashers
10—Kidde Raschel Knitters
14—Reiner Raschel Knitters
12—Van VI. 60", 70", S.S. Jiggs
Tenter Frames, Loop Dryer
Calenders, Padders
Office Furniture & Fixtures
Machine Shop
Sewing Machines

Selling Agent

THEODORE BIALEK & CO.

6704 Empire State Bldg., New York 1, N. Y. Longacre 3-4978-9
11-20th Ave., Paterson, N. J. Lambert 3-5886-7

All Types of Used Machines for Knit Underwear Mills

SCOTT & WILLIAMS and WILDMAN RIBBERS 8 to 16 cut, Sizes to 24"
TOMPKINS SPRING NEEDLE TABLES, All sizes and gauges
WILDMAN SPRING NEEDLE FBSS
WILLCOX & GIBBS FLATLOCKS, MERROWS, SINGER & METROPOLITAN SEWING MACHINES
Also Various types of SPECIAL MACHINES, CUTTING—CALENDERING—PRESSES, Etc.

Send us your Inquiries.

MOHAWK VALLEY KTG. MACH. CO.
Dwyer Ave. at Pixley St. Utica 2, N. Y. Phone 4-8109

•—• BEST BUYS EVER •—•

ON GOOD USED OR RECONDITIONED EQUIPMENT FROM STOCK AND NEW LIQUIDATIONS

THROWING

8—ATWOOD 10-B . . 6" OR 7" G.A. . . 1-2 LB. PKG. . . 100 SPINDLES EACH . . TAPER OR STRAIGHT WIND
10—U. S. TEXTILE PACE DRIVES . . 160 SPIN. EA. . . 8" G.A.
14—ATWOOD #100 TWISTERS . . HEADLESS . . 6½" SPACING
300—UNIVERSAL #50 CONERS . . LATE TYPE . . GEAR GAIN
15—U. S. REDRAWS . . 60 SPINDLE . . SPINDLELESS . .
12—SPINDLES UNIVERSAL KING SPOOLERS
3—U. S. TEXTILE DOUBLERS . . 116 SPINDLES EA.
1—FOSTER MODEL 102 . . 7" TRAVERSE . . 1953
2—FIDELITY SINGLE ARM SKEINERS . . 44" TO 72"

DYE HOUSE

100 L3. SMITH DRUM ROTARY . . RD 12 . . 4 POCKET
50 LB. SMITH DRUM ROTARY . . RD 12 . . 4 POCKET
10 LB. SAMPLE PADDLE . . MONEL . .
100 LB. S.D. PADDLE . . MONEL . . OPEN
2—HUSSONG 600 LB. . . S.S. 1950 . . DOUBLE AGITATOR
1—KLAUDER WELDON . . S.S. 1952 . . 500 LB. CAP.
1—10′ R & L BECK . . 60" D . . S.S. OPEN
6—8′ R & L BECKS . . 67" D . . S.S. TOT. ENCLOSED
1—4′ R & L BECK . . 60" D . . S.S. . . OPEN
1—3′ R & L BECK . . 60" D . . S.S. . . OPEN
3—EXTRACTORS FLETCHER . . MONEL . . 48" . . 30" . . 28"

LIQUIDATING • • KANMAK MILLS • • KULPMONT, PA.

WEAVING

18—DRAPER 50" XD LOOM 5 . . 1951 . . DIEHL DRIVES
30—C & K C-4 LOOMS . . 72" . . 25 HARNESS . . MULTIPLIERS
48—W-3 82" LOOMS . . MULTIPLIERS . . 1948-50
2—TERRILL BOBBIN STRIPPERS . . MODEL 735
2—JOHNSON SLASHERS . . 1950 30 x 60 . . 7 CAN S.S. V.S. DRIVE . . S.S. QUETCH . . SIZE KETTLES . .
1—SIPP 1951 93" D.Y. WARPER . . MAGNESIUM . . HI SPEED
2—COCKER 54¼" WARPERS . . 1950 . . STATIC ELIMINATORS
10—CREELS 300-1000 END . . MAG CONE & PIRN

NARROW FABRICS

12—C & K, 19′4" LOOMS . . 30 SPACE . . CROSS SHOT HEAVY DUTY CHAIN HEADS . . 1948 . . AND 60 SP. BATTON
2—FLETCHER 1946, 16′4" WEBBING LOOMS . . 66 SPACE CIRCULAR . . 1⅜" REED OPENING
2—FLETCHER 1950, 9′ HI SPEED . . 46 SPACE . . D.D. CIRCULAR BATTENS . . 1⅞" REED OPENING
2—FLETCHER HEAVY DUTY WEB OR PLASTIC LOOMS 18 SPACE CIRCULAR BATTENS . . SINGLE DECK LOOMS BUILT TO SPECIFICATIONS

MISCELLANEOUS

18 SPINDLE 10 x 5 ROVING FRAME . . 40" ROLLER TOP CARD . . RECTILINEAR COMB . . 6 SPACE COOMBER . . 2 FADEOMETERS . . AUTOCLAVE S.S. 10′ DEEP . . INTERNATIONAL CENTRIFUGE ¾ H.P. . . S.S. MIXING & STORAGE TANKS 100-800 GALS. . . 2 LYDON CONDITIONING BOXES S.S. . . LIGHTNING MIXERS . . BOBBINS . . RACKS . . 4 WILDMAN RIB KNITTERS 11 AND 12 CUT . . OFFICE EQUIPMENT . . SCALES . . B. C. KNOTTIER L.S. MODEL . . LAB EQUIPMENT . . QUILLS : . SEND US YOUR INQUIRIES . . WE BUY ENTIRE PLANTS . .

ABOVE LISTINGS FROM STOCK OR LIQUIDATION • • ONLY PARTIAL LISTING • • SUBJECT TO PRIOR SALE

Wm. Rabinowitz & Sons
TEXTILE MACHINERY, BOBBINS & SUPPLIES
214 - 222 Hamilton Street Phone HEmlock 3-7497 3-7498 Allentown, Pa.

ONLY PARTIAL LISTING • • SUBJECT PRIOR SALE • • SELECTED STOCK OFFERINGS

FOR SALE

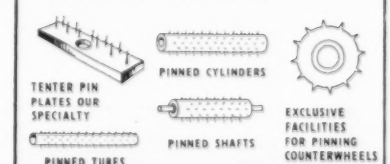
Good Machinery—Low Prices

Barber Colman Knotter LC 577
10 Can Ribbon Finishing Machine 18"
83" SE Hy Speed Warper & Mag Cone Creel
Johnson Sizers 3-5- & 7 Cans 66"
60" Extractors
Print Machines 3 & 6 Colors 60"
Dry Can Sets
SS Dye Jiggs
VV 70" High Speed Tubers
VV 3 Roll Friction Calender 60"
Tru Shade 8 String SS Piece Dye Kettles
Hinnekins 2 Roll Embosser (New)
Hinnekins Moire Calender 50" (New)

STAVE & KESSLER
106 Kearney Street
P. O. Box 1611 Paterson 16, N. J.

18 YEARS OF MANUFACTURING

PINS IN STAINLESS STEEL, MONEL, PLAIN STEEL — All Diameters, Any Length



SOUTHERN TEXTILE WORKS
P. O. Box 406 • 207 South Towers St., Anderson, S. C.

FOR SALE

TEXTILE MACHINERY - ATTRACTIVE PRICES

1—BALER, Galland-Henning, open type, 56" x 36" x 5′, Motor Drive.
1—STOCK BALER, Minnich, Bale 27" x 54" x 78", Motor Drive.
1—CLOTH BEAMER, Morrison, 54", with Tension Bars, Measuring Drum.
1—BRUSH, Gessner, Single Cyl. 24" dia. x 65" with leton, back brush.
1—BRUSHING Mach., P&W., 4 Cyl. 2 Bristle Brushes, 2 Nylon.
1—VERT. BRUSH, C&M., 60", 6 Brushes, 5½" dia. x 60", B.B. Mounted.
1—KNITGOODS CALENDER, Grand Rapids, 36", 3 Roll with Blower.
1—CEILING CONDENSER, P&S., Mod. 549, Double Drum, Motor Drive.
1—CLOTH CONDITIONER, Sjostrom, 64", B.B., Plastic Coated Rolls.
1—CAN DRYER, Textile Fin. Co., Horiz., 18 Monel Cans 49½" face x 23" dia.
2—DOUB., WIND., & MEAS. Mach., 66", 76", complete with motor drive.
1—SEMI-DECATUR, Gessner, Cyl. 72" x 36" with Swing Folder, Vac. Pump.
1—DESPECKING Mach., P&W., 89", with Folder, Scray, Motor Drive.
4—REEVES DRIVES, Nos. 0 to 3, two with hydraulic Controls.
1—CENTRIF. EXTRACTOR, Cummings-Landau, 40", Copper Basket.
2—INSPECTING Machines, Hermas 48" & C&M 96", both w/tables, Motorized.
1—S.S. PIECE DYE KETTLE, Open Type, Oval Reel, 3′ wide, 40" deep, 70" front to back.
3—LUMPERS, Clark, 48", Ball Bearing, with Hopper Feeds.
2—MEAS. & ROLLING Mach., P&W., 66", 80", AWC Models, w/Manayunk Rolling Head.
2—Double Acting NAPPERS, D&F., 72", 80", 24 Rolls, Folders.
1—Double Acting NAPPER, Gessner, 72", 18 gear driven rolls, folder.
2—Double Acting WOONSOCKET NAPPERS, 84", 36 Rolls, Folders, Drives.
1—RAG PICKER, Kitson, B.B. Cyl. 21½" x 40" dia., F. Table 16" x 54".
2—MIXING PICKERS, D&F., 6 Bar, 42", 48", Steel Bonnets, Feed Tables.
2—ROTARY STEAM PRESSES, Voelker, Double Bed, Cyls. 16" dia. x 65" and 86" face.
1—Merrimack SHEAR, P&W., 72½", 3 Blade, File Cut Revolvers, High Speed Blades.
1—SPOOL STRIPPER, G&Y., for 33½" Spools, Rolls B.B. Chain Driven.
1—Pacific Eveness TESTER, Mod. ERT-5, 1951.
1—Eveness TESTER, Saco-Lowell, with Stand.
1—TENSILGRAPH TESTER, Incline plane type, Model IP-4, Motorized.

McDOWELL ASSOCIATES, INC.

General Offices 41-E 42 Street
New York City 17, N. Y.
Phone: Murray Hill 2-7417

Warehouse No. 1 N. Front
Dock & Water Sts., Hudson, N. Y.
Phone: Hudson 8-3211

INDEX TO ADVERTISERS

An * indicates advertisers who have essential technical information on their products in the **IMPORTANT** 1958 **FACT FILE** issue.

Acme Steel Co. 74
Allis Co., Louis 173
American Moistening Co.. 26
Anheuser-Busch, Inc. 159
Armco Steel Corp. 71
Armstrong Cork Co.....20-21
Ateliers Roannais de Constructions Textiles.. 31
*Atkinson, Haserick & Co.. 66
*Atlas Electric Devices Co. 164

*Bahnson Company 22-23
Barber-Colman Co. 177
*Bendix Aviation Corp Eclipse Mach. Div..... 187
Bristol Company 28
Buffalo Forge Co. 175
*Butterworth & Sons Co., H. W. 15

Carbic Color & Chemical Co., Inc. 77
Carrier Corp. 40
Ciba Co. 81
Cleveland Crane & Eng'g. Co. Tramrail Div. 171
Clinton Corn Processing Co. 109
*Cobble Bros. Machinery Co. 149
Cobbs Fruit & Preserving Co. 170
*Cocker Machine & Foundry Co. 72
Collins Bros. Machine Co.. 168
Columbia-Southern Chem. Corp. 135
Corn Products Sales Co... 114

Darnell Corp., Ltd. 172
Dayton Rubber Co., The Industrial Div. 165
Textile Div. 24-25
Delta Air Lines 166
*Diehl Mfg. Co. .....2nd Cover
Dinsmore Mfg. Co..... 182
Dixie Bearings, Inc. 157
Dixon Corp. 180
Dow Chemical Co. 113
Textile Fiber Div....29, 131
*Draper Corporation ..11, 34-35
Duesberg-Bosson of America, Inc. 188
*duPont de Nemours & Co., E. I.
Electrochemical Dept... 111
* Film Dept. 133
* Textile Fibers Div...116-117

Eastman Chem. Prods. Inc. Chem. Div. 105

Fairbanks Co. 189
*Faultless Caster Corp. 148
*Finnell System, Inc. 126
*Foster Machine Co. 129
Foxboro Co. 68-69
Franklin Process Co. 145

Gaston County Dyeing Mach. Co. 154
Gates Rubber Co. 79
*General Chemical Div. Allied Chem. Corp. 115
*General Dyestuff Co..... 121
*Graton & Knight Co..... 185
*Guider Specialty Co..... 158
Gulf Oil Corp. 146-147

Harshaw Chemical Co. ... 96
*Harwood & Son, George.. 174
Haskell-Dawes Mach. Co., Inc. 168
Herr Mfg. Co., Inc..... 37
Hooker Chemical Corp.... 139
*Hubinger Co., The 78
Hungerford & Terry, Inc.. 183
Hunter Machine Co., James 163

Industrial Rayon Corp..118-119
Industrie-Werke-Karlsruhe 143
Instron Eng'g. Corp..... 142
International Salt Co. 80

Jenkins Bros. 33
*Jenkins' Sons, Inc., M. W. 170
*Jiffy Textile Marker Co... 190
*Johnson Corp., The 184

Keever Starch Co. 120
Kidde Tex. Mchry. Corp.. 75
*Klauder-Weldon-Giles Mach. Co. 16
Koppers Co., Inc. 87

Lindly & Co., Inc. 176
Link-Belt Co. 19
*Livingston & Haven, Inc.. 174
Loper Co., Ralph E..... 190
Lubriplate Div. Fiske Bros. Refining Co. 178

M-B Products Co. 176
Minnesota Mining & Mfg. Co. 76
Moisture Reg. Co. 172
Monsanto Chem. Co. Inorganic Div. 88
*Mount Hope Machinery Co., Inc. 140
Muller, Franz 41

Nashua Corp. 18
National Aniline Div. Allied Chem. Corp. 27
Fiber Sales Div. 122
National Starch Prods., Inc. 92
Naugatuck Chem. Div. U. S. Rubber Co. 98
Norgren Co., C. A. 39

Oakite Products, Inc. 182

Powell Co., William..... 38

Raybestos-Manhattan Inc. Manhattan Rubber Div. .....3rd Cover
Red-Ray Mfg. Co., Inc.... 186
Ridge Tool Co. 156
Roberts Co. 17
*Rohm & Haas Co. 137
Ryerson & Son, Inc. 30

*Saco-Lowell Shops 32, 100
Sant' Andrea Novara 152
Scherr Co., Inc., George... 190
*Scott Testers, Inc. 185
*Semet-Solvay Petrochemical Div., Allied Chem. Corp. 90
Shell Chem. Corp. 94
*Simco Company 158
SKF Industries, Inc. 125
*Societe Alsacienne De Constructions Mecaniques.. 66
Solvay Process Div. Allied Chem. Corp..... 109
*Sonoco Prods. Co. 73
Square D Co. 151
Stein Hall & Co., Inc..... 156
*Stowe-Woodward, Inc.144, 188
*Supreme Knitting Mach. Co., Inc. 169
Suter Co., Alfred 187

Taylor Instrument Cos.... 160
Taylor, Stiles & Co..... 161
Texas Co., The.....4th Cover
Textile Banking Co. 150
*Textile Machine Works.. 44
*Thilmany Pulp & Paper Co. 155
Tompkins Bros. 166
Torrington Co. (Needles). 70
*Turbo Machine Co. 153

Universal Winding Co..36, 102
U. S. Steel Corp..... 179
*Utica Novelty & Mill Specialty Co. 184

*Victor Ring Traveler Co.. 167

*Wallerstein Co., Inc. 189
*Warner & Swasey Co. 42
Whitin Machine Works .. 141
Wildman-Jacquard Co. ... 12
*Wolf & Co., Jacques..... 82
Wood's Sons Co., T. B.... 162
Woonsocket Rubber Co. .. 174
*Wright Mchry. Co. Div. of Sperry Rand Corp. 186

Young Aniline Works, Inc. 183

CLASSIFIED ADVERTISING
F. J. Eberle, Business Mgr.

EMPLOYMENT OPPORTUNITIES 191

BUSINESS OPPORTUNITIES 191

EQUIPMENT
(Used or Surplus New)
For Sale 192-195

WANTED
Equipment 191

ADVERTISERS INDEX

Advanced Textile Company.... 194
Ambler Textile Machinery Company 194
American Air Compressor Corp. 192
Bialek & Company, Theodore... 194
Blank Company, Inc., A. & M.. 194
Fitzgerald, James E..... 192
Industrial Products of America.. 192
Machinery Sales Corp..... 192
Mar-Day Textiles 192
McDowell Associates, Inc..... 195
Miller Machinery Company.... 192
Mohawk Valley Ktg. Machinery Co. 194
Pennsylvania Spool & Equipment Co. 192
Perry Equipment Corp..... 194
Rabinowitz & Sons, William.... 195
Republic Textile Equipment Co.. 193
Skelton Inc., H. C..... 191
Southern Textile Works..... 195
Stave & Kessler..... 195
Textile Auxiliaries Inc..... 192
Wheeler Company, Frank W.... 192

This index is published as a convenience to the reader. Every care is taken to make it accurate, but Textile World assumes no responsibility for errors or omissions.

For More Information

. . . on Advertisements, Equipment & Supply News, New Dyes & Chemicals, or free New Literature described in this issue. . .

. . . Please circle the appropriate numbers on the post cards below. . . . Fill in your name, job title, mill, and address and mail. No postage required.

LITERATURE, BOOKLETS AND TECHNICAL BULLETINS AVAILABLE FROM FOLLOWING ADVERTISERS IN THIS ISSUE:

L-1	Allis Co., Louis	173
L-2	Armco Steel Corp.	71
L-3	Bristol Co.	28
L-4	Buffalo Forge Co.	175
L-5	Carrier Corp.	40
L-6	Cleveland Crane & Eng'g. Co.	171
L-7	Cobbs Fruit & Preserving Co.	170
L-8	Darnell Corp	172
L-9	Dixon Corp.	180
L-10	DuPont, Film Dept.	133
L-11	Fairbanks Co.	189
L-12	Faultless Caster Corp.	148
L-13	Finnell System, Inc.	181
L-14	Fiske Bros., Lubriplate Div.	178
L-15	Foxboro Co.	68-69
L-16	Gaston County Dyeing Machine Co.	154
L-17	Graton & Knight Co.	185
L-18	Herr Mfg. Co.	37
L-19	Hooker Chemical Corp.	139
L-20	Hubinger Co.	78
L-21	Hunter Mach. Co., James	163
L-22	Instron Eng'g. Corp.	142
L-23	Johnson Corp.	184
L-24	Link-Belt Co.	19
L-25	M-B Products	176
L-26	Minnesota Mining & Mfg. Co.	76
L-27	Moisture Register Co.	172
L-28	Monsanto Chemical Co.	88
L-29	Mt. Hope Machinery Co.	140
L-30	Powell Co., Wm.	38
L-31	Scherr Co., Inc., George	190
L-32	Scott Testers, Inc.	185
L-33	Solvay Process Div.	107
L-34	Square D Co.	151
L-35	Supreme Ktg. Machine Co.	169
L-36	Taylor, Stiles & Co.	161
L-37	Thilmany Pulp & Paper Co.	155
L-38	Wolf & Co., Jacques	82
L-39	Wood's Sons Co., T. B.	162
L-40	Wright Machy. Co.	186

This card expires January 31, 1959

ADVERTISERS' LITERATURE:

L-1	L-2	L-3	L-4	L-5	L-6	L-7	L-8	L-9	L-10	L-11	L-12	L-13	L-14
L-15	L-16	L-17	L-18	L-19	L-20	L-21	L-22	L-23	L-24	L-25	L-26	L-27	L-28
L-29	L-30	L-31	L-32	L-33	L-34	L-35	L-36	L-37	L-38	L-39	L-40	L-41	L-42
L-43	L-44	L-45	L-46	L-47	L-48	L-49	L-50	L-51	L-52				

ADVERTISEMENTS: INSIDE FRONT COVER — INSIDE BACK COVER — BACK COVER

A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	A-9	A-10	A-11	A-12	A-13	A-14
A-15	A-16	A-17	A-18	A-19	A-20	A-21	A-22	A-23	A-24	A-25	A-26	A-27	A-28
A-29	A-30	A-31	A-32	A-33	A-34	A-35	A-36	A-37	A-38	A-39	A-40	A-41	A-42
A-43	A-44	A-45	A-46	A-47	A-48	A-49	A-50	A-51	A-52	A-53	A-54	A-55	A-56
A-57	A-58	A-59	A-60	A-61	A-62	A-63	A-64	A-65	A-66	A-67	A-68	A-69	A-70
A-71	A-72	A-73	A-74	A-75	A-76	A-77	A-78	A-79	A-80	A-81	A-82	A-83	A-84
A-85	A-86	A-87	A-88	A-89	A-90	A-91	A-92	A-93	A-94	A-95	A-96	A-97	A-98
A-99	A-100	A-101	A-102	A-103	A-104	A-105	A-106	A-107	A-108	A-109	A-110	A-111	A-112
A-113	A-114	A-115	A-116	A-117	A-118	A-119	A-120	A-121	A-122	A-123	A-124	A-125	A-126
A-127	A-128	A-129	A-130	A-131	A-132	A-133	A-134	A-135	A-136	A-137	A-138	A-139	A-140
A-141	A-142	A-143	A-144	A-145	A-146	A-147	A-148	A-149	A-150	A-151	A-152	A-153	A-154
A-155	A-156	A-157	A-158	A-159	A-160	A-161	A-162	A-163	A-164	A-165	A-166	A-167	A-168
A-169	A-170	A-171	A-172	A-173	A-174	A-175	A-176	A-177	A-178	A-179	A-180	A-181	A-182
A-183	A-184	A-185	A-186	A-187	A-188	A-189	A-190	A-191	A-192	A-193	A-194	A-195	A-196
A-197	A-198	A-199	A-200	A-201	A-202	A-203	A-204	A-205	A-206	A-207	A-208	A-209	A-210
A-211	A-212	A-213	A-214	A-215	A-216	A-217	A-218	A-219	A-220	A-221	A-222	A-223	A-224
A-225	A-226	A-227	A-228	A-229	A-230	A-231	A-232	A-233	A-234	A-235	A-236	A-237	A-238
A-239	A-240	A-241	A-242	A-243	A-244	A-245	A-246	A-247	A-248	A-249	A-250	A-251	A-252
A-253	A-254	A-255	A-256	A-257	A-258	A-259	A-260	A-261	A-262	A-263	A-264	A-265	A-266
A-267	A-268	A-269	A-270	A-271	A-272	A-273	A-274	A-275	A-276	A-277	A-278	A-279	A-280
A-281	A-282	A-283	A-284	A-285	A-286	A-287	A-288	A-289	A-290	A-291	A-292	A-293	A-294

EQUIPMENT AND SUPPLY NEWS:

T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8	T-9	T-10	T-11	T-12	T-13	T-14
T-15	T-16	T-17	T-18	T-19	T-20	T-21	T-22	T-23	T-24	T-25	T-26	T-27	T-28
T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37	T-38	T-39	T-40	T-41	T-42
T-43	T-44	T-45	T-46	T-47	T-48	T-49	T-50	T-51	T-52	T-53	T-54	T-55	T-56
T-57	T-58	T-59	T-60	T-61	T-62	T-63	T-64	T-65	T-66	T-67	T-68	T-69	T-70
T-71	T-72	T-73	T-74	T-75	T-76	T-77	T-78	T-79					

NEW LITERATURE:

F-1	F-2	F-3	F-4	F-5	F-6	F-7	F-8	F-9	F-10	F-11	F-12	F-13	F-14
F-15	F-16	F-17	F-18	F-19	F-20	F-21	F-22	F-23	F-24	F-25	F-26	F-27	F-28
F-29	F-30	F-31	F-32	F-33	F-34	F-35	F-36	F-37	F-38	F-39	F-40	F-41	F-42
F-43	F-44	F-45	F-46	F-47	F-48	F-49	F-50	F-51	F-52	F-53			

DYES AND CHEMICALS:

D-1	D-2	D-3	D-4	D-5	D-6	D-7	D-8	D-9	D-10	D-11	D-12	D-13	D-14
D-15	D-16	D-17	D-18	D-19	D-20	D-21	D-22	D-23	D-24				

TEXTILE WORLD, A McGraw-Hill Publication, New York 36, N. Y., November, 1958

This card expires January 31, 1959

ADVERTISERS' LITERATURE: L-1 L-2 L-3 L-4 L-5 L-6 L-7 L-8 L-9 L-10 L-11 L-12 L-13 L-14 L-15 L-16 L-17 L-18 L-19 L-20 L-21 L-22 L-23 L-24 L-25 L-26 L-27 L-28 L-29 L-30 L-31 L-32 L-33 L-34 L-35 L-36 L-37 L-38 L-39 L-40 L-41 L-42 L-43 L-44 L-45 L-46 L-47 L-48 L-49 L-50 L-51 L-52

ADVERTISEMENTS: INSIDE FRONT COVER — INSIDE BACK COVER — BACK COVER

A-1 A-2 A-3 A-4 A-5 A-6 A-7 A-8 A-9 A-10 A-11 A-12 A-13 A-14
A-15 A-16 A-17 A-18 A-19 A-20 A-21 A-22 A-23 A-24 A-25 A-26 A-27 A-28
A-29 A-30 A-31 A-32 A-33 A-34 A-35 A-36 A-37 A-38 A-39 A-40 A-41 A-42
A-43 A-44 A-45 A-46 A-47 A-48 A-49 A-50 A-51 A-52 A-53 A-54 A-55 A-56
A-57 A-58 A-59 A-60 A-61 A-62 A-63 A-64 A-65 A-66 A-67 A-68 A-69 A-70
A-71 A-72 A-73 A-74 A-75 A-76 A-77 A-78 A-79 A-80 A-81 A-82 A-83 A-84
A-85 A-86 A-87 A-88 A-89 A-90 A-91 A-92 A-93 A-94 A-95 A-96 A-97 A-98
A-99 A-100 A-101 A-102 A-103 A-104 A-105 A-106 A-107 A-108 A-109 A-110 A-111 A-112
A-113 A-114 A-115 A-116 A-117 A-118 A-119 A-120 A-121 A-122 A-123 A-124 A-125 A-126
A-127 A-128 A-129 A-130 A-131 A-132 A-133 A-134 A-135 A-136 A-137 A-138 A-139 A-140
A-141 A-142 A-143 A-144 A-145 A-146 A-147 A-148 A-149 A-150 A-151 A-152 A-153 A-154
A-155 A-156 A-157 A-158 A-159 A-160 A-161 A-162 A-163 A-164 A-165 A-166 A-167 A-168
A-169 A-170 A-171 A-172 A-173 A-174 A-175 A-176 A-177 A-178 A-179 A-180 A-181 A-182
A-183 A-184 A-185 A-186 A-187 A-188 A-189 A-190 A-191 A-192 A-193 A-194 A-195 A-196
A-197 A-198 A-199 A-200 A-201 A-202 A-203 A-204 A-205 A-206 A-207 A-208 A-209 A-210
A-211 A-212 A-213 A-214 A-215 A-216 A-217 A-218 A-219 A-220 A-221 A-222 A-223 A-224
A-225 A-226 A-227 A-228 A-229 A-230 A-231 A-232 A-233 A-234 A-235 A-236 A-237 A-238
A-239 A-240 A-241 A-242 A-243 A-244 A-245 A-246 A-247 A-248 A-249 A-250 A-251 A-252
A-253 A-254 A-255 A-256 A-257 A-258 A-259 A-260 A-261 A-262 A-263 A-264 A-265 A-266
A-267 A-268 A-269 A-270 A-271 A-272 A-273 A-274 A-275 A-276 A-277 A-278 A-279 A-280
A-281 A-282 A-283 A-284 A-285 A-286 A-287 A-288 A-289 A-290 A-291 A-292 A-293 A-294

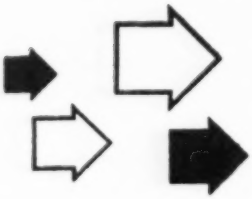
EQUIPMENT AND SUPPLY NEWS: T-1 T-2 T-3 T-4 T-5 T-6 T-7 T-8 T-9 T-10 T-11 T-12 T-13 T-14 T-15 T-16 T-17 T-18 T-19 T-20 T-21 T-22 T-23 T-24 T-25 T-26 T-27 T-28 T-29 T-30 T-31 T-32 T-33 T-34 T-35 T-36 T-37 T-38 T-39 T-40 T-41 T-42 T-43 T-44 T-45 T-46 T-47 T-48 T-49 T-50 T-51 T-52 T-53 T-54 T-55 T-56 T-57 T-58 T-59 T-60 T-61 T-62 T-63 T-64 T-65 T-66 T-67 T-68 T-69 T-70 T-71 T-72 T-73 T-74 T-75 T-76 T-77 T-78 T-79

NEW LITERATURE: F-1 F-2 F-3 F-4 F-5 F-6 F-7 F-8 F-9 F-10 F-11 F-12 F-13 F-14 F-15 F-16 F-17 F-18 F-19 F-20 F-21 F-22 F-23 F-24 F-25 F-26 F-27 F-28 F-29 F-30 F-31 F-32 F-33 F-34 F-35 F-36 F-37 F-38 F-39 F-40 F-41 F-42 F-43 F-44 F-45 F-46 F-47 F-48 F-49 F-50 F-51 F-52 F-53

DYES AND CHEMICALS: D-1 D-2 D-3 D-4 D-5 D-6 D-7 D-8 D-9 D-10 D-11 D-12 D-13 D-14 D-15 D-16 D-17 D-18 D-19 D-20 D-21 D-22 D-23 D-24

TEXTILE WORLD, A McGraw-Hill Publication, New York 36, N. Y., November, 1958

Textile **World**



reprints available

Reprints of the following articles run in past issues of TEXTILE WORLD are available at the price indicated. To order, write TEXTILE WORLD, 330 W. 42nd St., New York 36, N. Y., stating the titles and quantities of the reprints desired. Enclose check or money order payable to TEXTILE WORLD.

(Please type or print)

NAME _____

TITLE or POSITION _____

COMPANY _____

ADDRESS _____

CITY and STATE _____

FIRST CLASS
Permit No. 64
(Sec. 34.9 P.L.&R.)
NEW YORK, N. Y.

BUSINESS REPLY MAIL
No Postage Stamp Necessary if Mailed in the United States

Postage Will Be Paid By—

Textile **World**
330 W. 42nd Street
NEW YORK 36, N. Y.

McGraw-Hill Publishing Co., Inc.

(Please type or print)

NAME _____

TITLE or POSITION _____

COMPANY _____

ADDRESS _____

CITY and STATE _____

FIRST CLASS
Permit No. 64
(Sec. 34.9 P.L.&R.)
NEW YORK, N. Y.

BUSINESS REPLY MAIL
No Postage Stamp Necessary if Mailed in the United States

Postage Will Be Paid By—

Textile **World**
330 W. 42nd Street
NEW YORK 36, N. Y.

McGraw-Hill Publishing Co., Inc.

The NEW RESINS FOR TREATING WHITE COTTON GOODS
1 to 15 copies, $1 each; 16 to 30 copies, 75¢ each; over 30 copies, 60¢ each

What are they? How do they react? How do you apply them? An expert in the field answers these and other questions about this important development in textile chemistry.

COTTON CRUSHPROOFING
1 to 15 copies, $1 each; 16 to 30 copies, 75¢ each; over 30 copies, 60¢ each

An authoritative report that gives a brief background on crushproofing and explains how cotton fiber reacts to resin finishes, how crushproofing works on cotton, the types of chemical used, and pointers on applying the finishes.

COTTON-FIBER TABLE
50¢ each, 40¢ each in lots of 20 or more

New edition lists raw-cotton properties and manufacturing performance of the 11 leading varieties of cotton. Other data show fiber consumption in the U. S. and properties of cotton used in 32 basic textiles.

CHEMICAL FINISHING TECHNIQUES
$1 each, 85¢ in lots of 20 or more

A series of four articles that explain the chemical and physical properties of a number of finishing materials and their applications to and reactions with cellulose and various man-made fibers.

ENGINEERED TEXTILE DESIGN
Set of 5 articles, $1.25 per set

A series of articles of interest to those engaged in practical fabric design or in teaching functional design. One article introduces the all-fiber system, which takes the guess out of how many ends and picks to use in changing to a new fabric. Another shows how to change weight without changing structure. Detailed numerical examples are provided. A discussion of yarn diameters, as the basic of structure, opens the series.

METALLIC-YARN WET-PROCESSING GUIDE
50¢ each, 40¢ each in lots of 20 or more

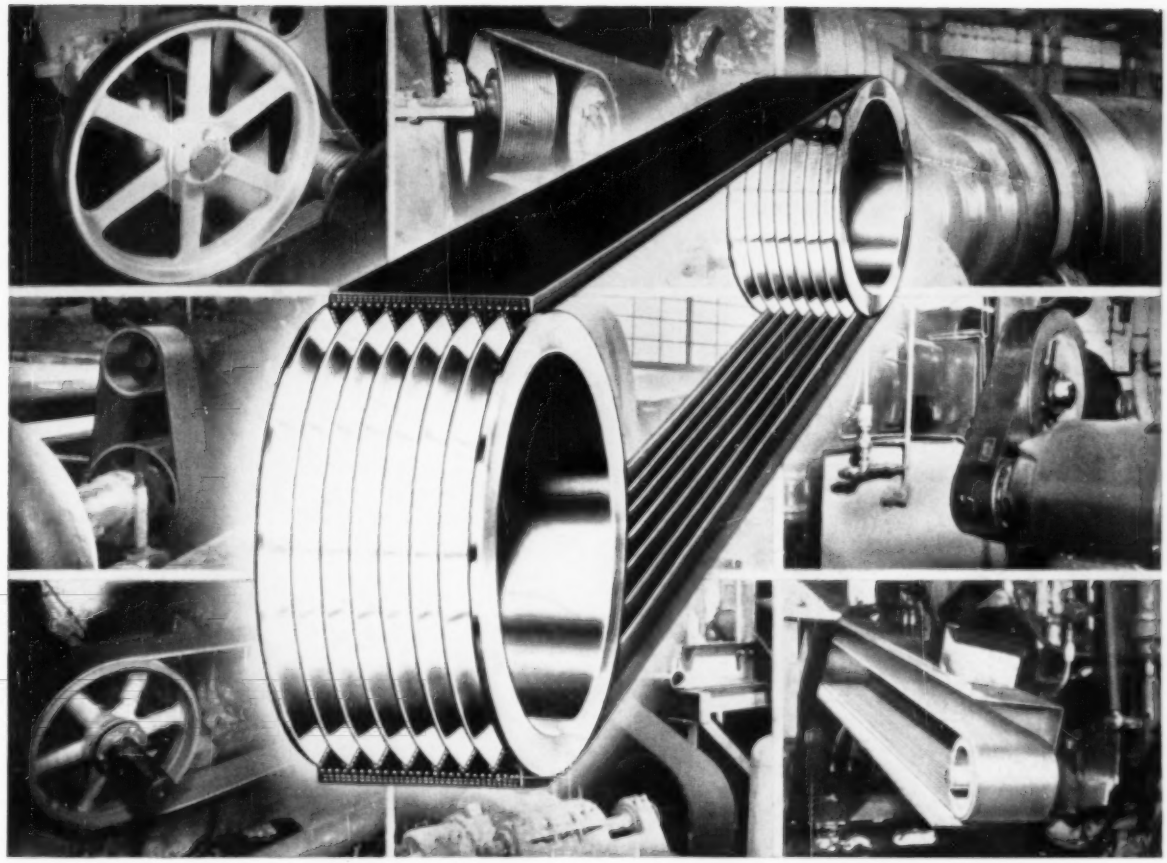
Wall chart shows step-by-step guide for wet processing each of six principal types of metallic yarns. Text gives details for handling different fabrics containing metallic yarns.

HERE'S A QUICK WAY TO IDENTIFY FIBERS
50¢ each, 40¢ each in lots of 20 or more

A four-step method of fiber identification is described. A full-color chart of identification stains, a solvent chart, and fiber cross sections are included.

WOVEN CLOTH DEFECTS
1 to 15 copies, $1 each; 16 to 30 copies, 75¢ each; over 30 copies, 60¢ each

An illustrated series of articles that show each major cloth defect, give its causes, and explain how to eliminate it.



R/M *Poly-V*® Drive Delivers More Power in Less Space

...*"More Use for your ~~per~~ Dollar"*

R/M's patented new drive design is the reason. R/M Poly-V Drive employs a *single*, endless, parallel V-ribbed belt running on sheaves designed to mate precisely with the belt ribs. Flat belt strength and simplicity *plus* the high V-groove grip of V-belts adds up to *twice* the tractive surface of ordinary multiple V-belts. It's proved in actual performance on drive after drive, to deliver up to 50% *more* power in the *same* space as a multiple-belt drive . . . *equal* power in as little as ⅔ the space! Other features are equally important:

- *No* Belt "Matching" Problems . . . Reduced Downtime Costs
- Uniform Tension and Constant Speed Ratios—*No* Load to *Full* Load!
- Smoother, *Cooler* Running . . . Oil Proof, Non Spark, Heat Resistant
- *Less* Shaft Overhang . . . *Less* Drive Weight
- *Two* Belt Cross Sections Meet *Every* Heavy Duty Power Transmission Requirement

Greater power delivery and dependability for *every* drive dollar begins when you specify R/M Poly-V* Drive. R/M engineers who developed it will assist you in determining the best installation for your application. Contact your R/M representative . . . or write for Poly-V Drive Bulletin #6638.

**Poly-V is a registered Raybestos-Manhattan trademark.*

RM 830

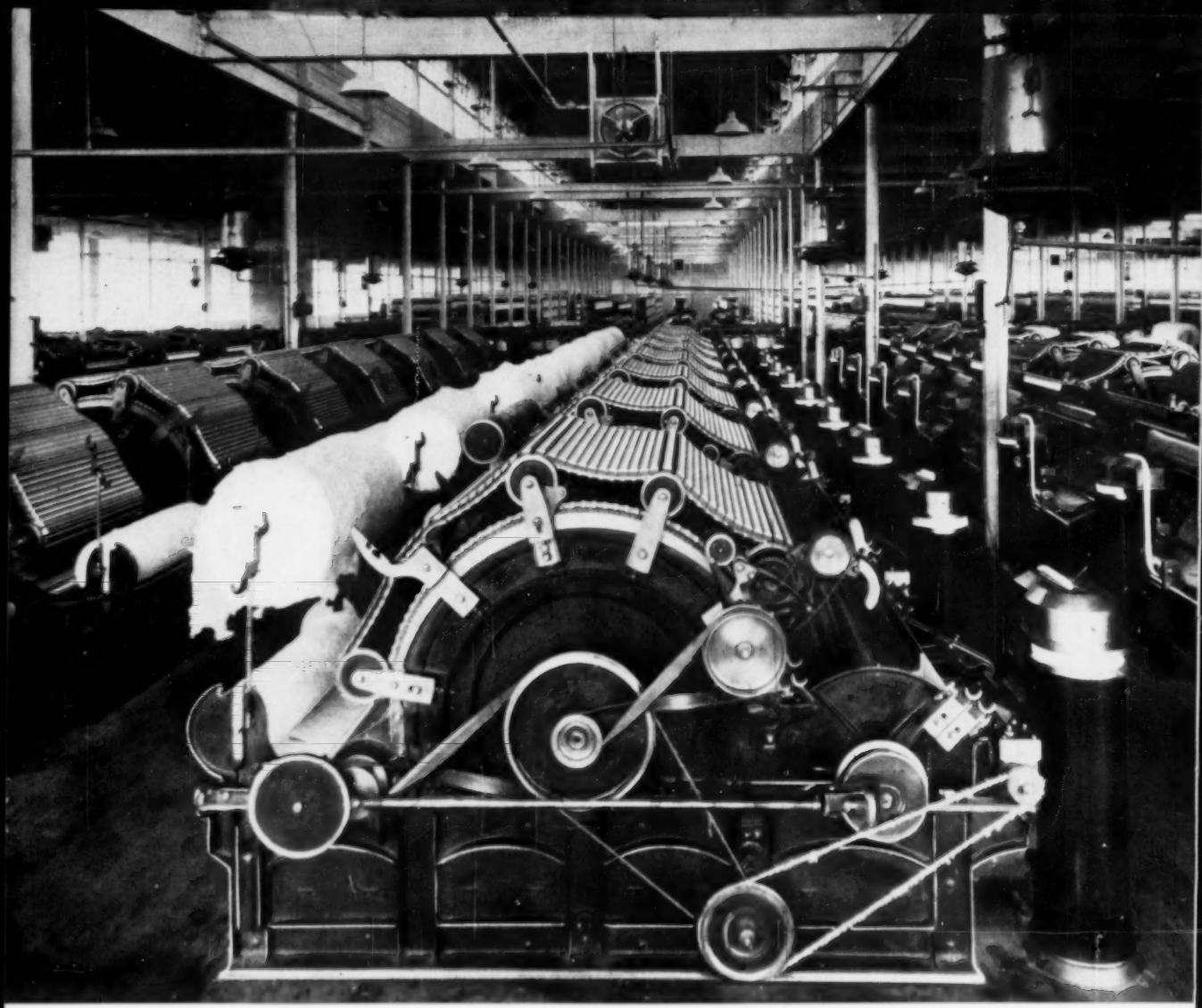
BELTS • HOSE • ROLL COVERINGS • TANK LININGS • INDUSTRIAL RUBBER SPECIALTIES

MANHATTAN RUBBER DIVISION—PASSAIC, NEW JERSEY

RAYBESTOS-MANHATTAN, INC.

Other R/M products: Abrasive and Diamond Wheels • Brake Blocks and Linings • Clutch Facings • Asbestos Textiles • Mechanical Packings • Engineered Plastics • Sintered Metal Products • Industrial Adhesives • Laundry Pads and Covers • Bowling Balls

RM



Lubrication is simpler with Multifak

Texaco Multifak combines—*in one product*—all the properties you need to protect your grease-lubricated bearings. It prolongs bearing life because it's a premium quality lubricant that stays in the bearings and resists oxidation and separation. It lets you take full advantage of a centralized lubrication system because it's effective over a wide temperature range, and remains pumpable. And Multifak reduces power costs because it has low torque characteristics—bearings run easier, and more of the power goes to the machinery.

Use of Multifak also saves time and money by cutting lubricant inventory. And because it's the *right* lubricant for so many jobs, there's far less chance of lubrication error.

A Texaco Lubrication Engineer will gladly show you how Multifak can help you simplify lubrication throughout your mill—and give you more effective lubrication at less cost. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write: The Texas Company, 135 East 42nd Street, New York 17, N. Y.

LUBRICATION IS A MAJOR FACTOR IN COST CONTROL

(PARTS, INVENTORY, PRODUCTION, DOWNTIME, MAINTENANCE)